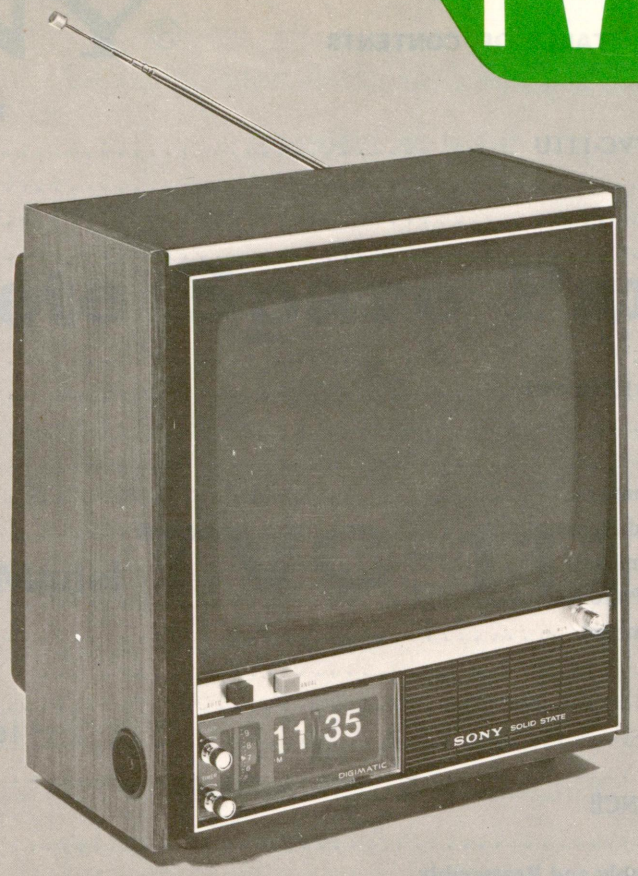
ISO Set using ISO Screws

TVC-111U



SPECIFICATIONS

System:	American TV standard
Channel coverage:	VHF Channels A2 – A13
	UHF Channels A14 – A83
Antenna system:	Built-in telescopic antenna
	Terminals for 300 ohm external antenna
Picture tube:	11″ (measured diagonally), 90°deflection aluminized screen
Transistors:	28
Diodes:	15
Rectifiers:	2 (Selenium)
IF circuit:	3 stages with 4 stagger-tuned elements.
	Video IF 45.75MHz, sound IF 41.25MHz, Bandwidth 3.0MHz/-3dB
Sound system:	4.5MHz intercarrier system
	Power output: 800mW
	Speaker: 3-1/8″ x 4-3/4″ (8 x 12cm) oval type
	Voice-coil impedance: 16 ohm
Recording jack:	Output impedance: 1K ohm, Output level: −60dB (0.77mV)
Automatic control:	Foward & Pulse-operated AGC, Diode AFC
Power requirement:	AC 117V, 60Hz
Power consumption:	31W (maximum)
Dimensions:	13-7/16″ (W) x 13-1/8″ (H) x 11-5/16″ (D)
	(341 x 334 x 287mm)
Weight:	18 lb (8.2 kg)

SONY®

SERVICE MANUAL

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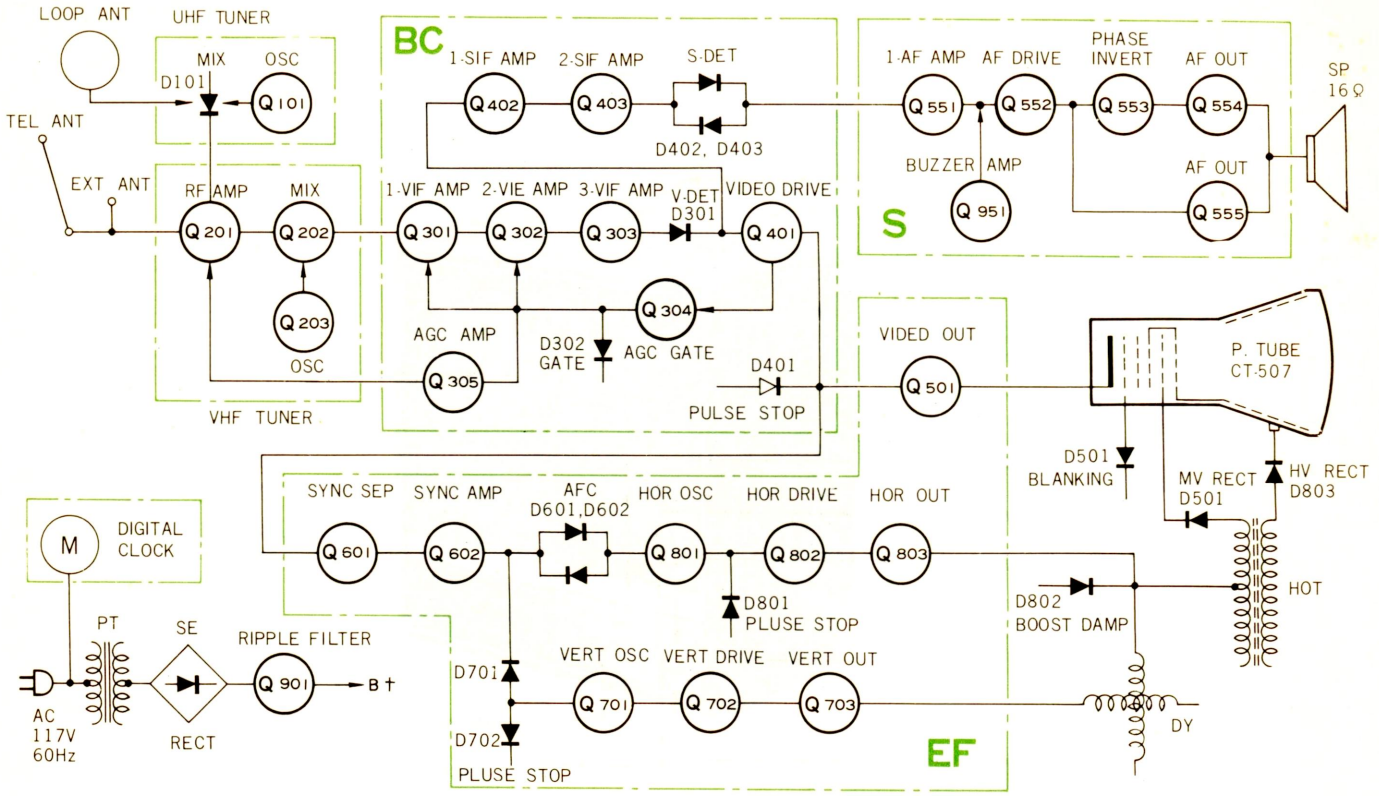
BLOCK DIAGRAM



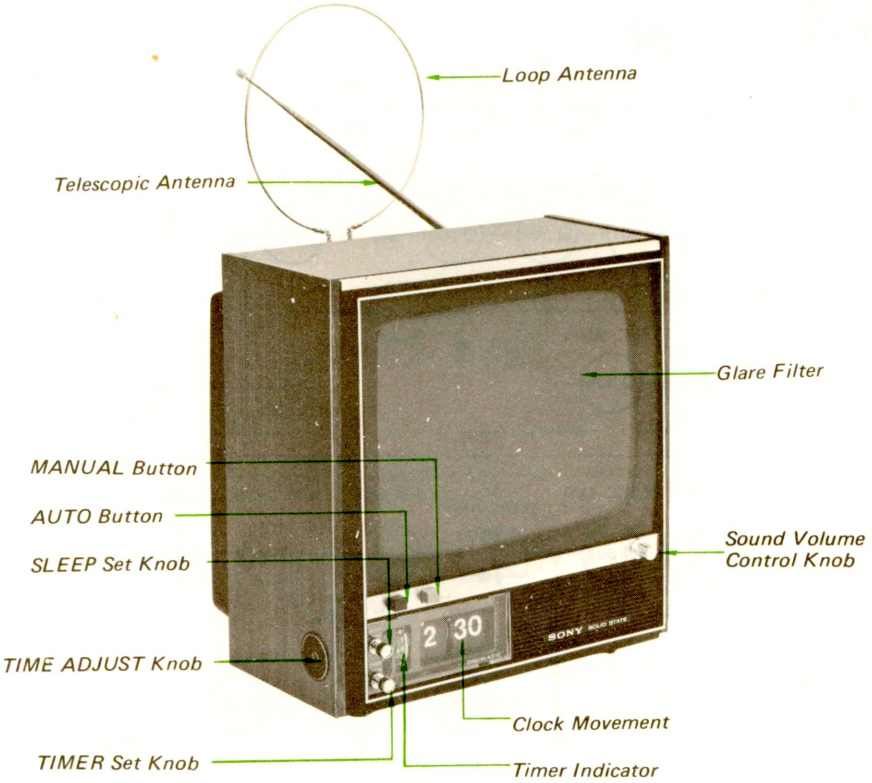
GENERAL INFORMATION

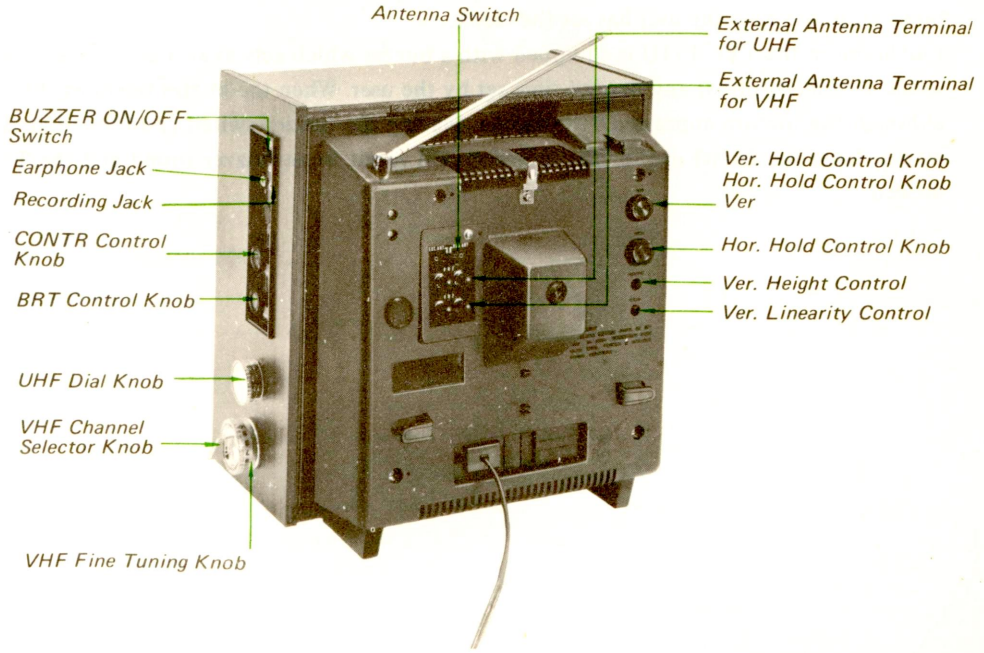
A digital clock is built into the SONY Model TVC-111U for the benefit of users who wish to have an alarm-clock type television set with remarkable preset operation.

The built-in digital clock makes it possible to turn on the television set automatically at a desired time set by the user. The user can also select the time at which the television automatically turns off within three hours from the time the user has set the clock.

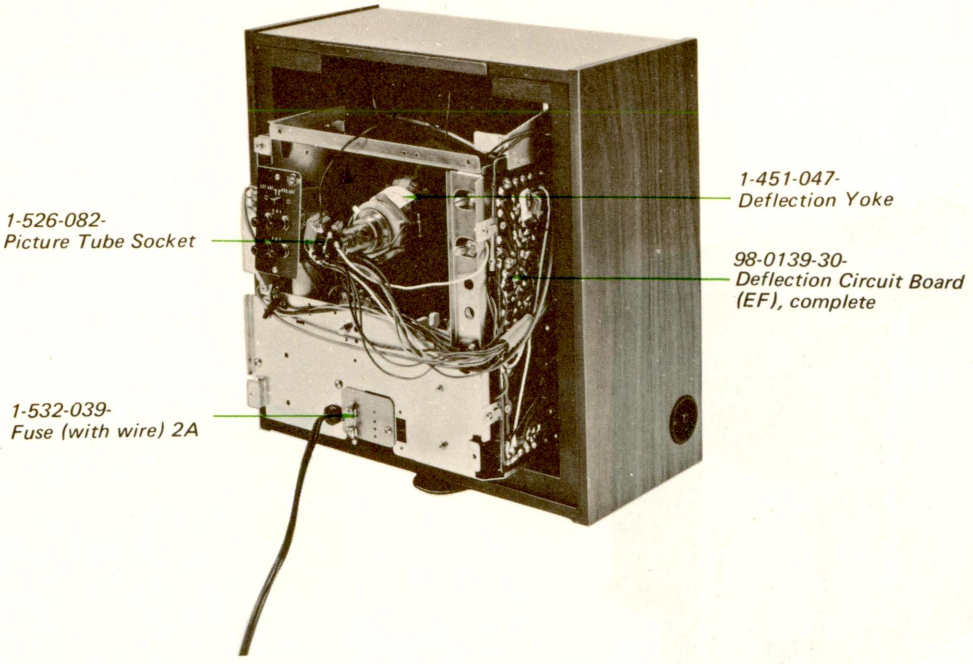
Furthermore the TVC-111U is equipped with a buzzer which acts as an alarm clock by producing a buzzer sound automatically at any desired time set by the user. When the buzzer operates, TV audio is turned off although the picture appears on the screen. Placing the buzzer switch (positioned at the right side when viewed from the front) in the OFF position will result in no buzzer sound and the TV sound comes on instead.

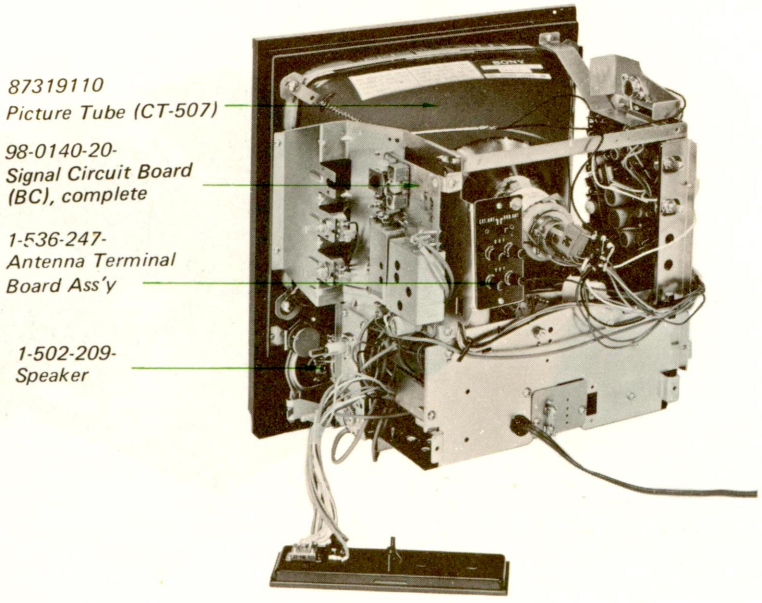
EXTERNAL VIEW





MAJOR PARTS LOCATION

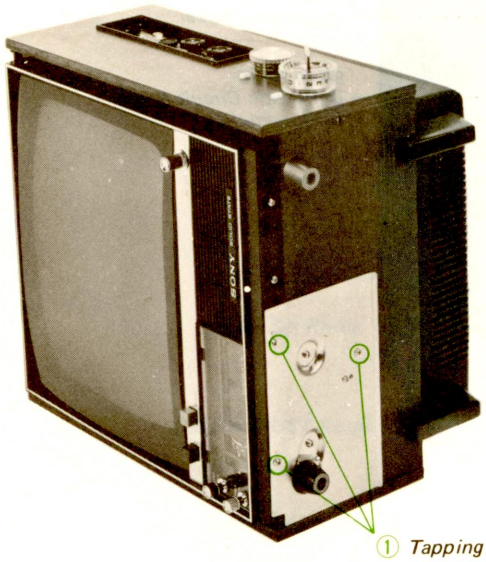




DISASSEMBLY

Clock Removal

1. Remove the three screws (① in Fig. 1).
2. Pull out the three knobs (SLEEP set, TIMER set and TIME ADJUST).
3. Pull out the clock (Fig. 2).
4. Disconnect the 8-pin socket.



① *Tapping Screw*
⊕BV 3 × 8

Fig. 1

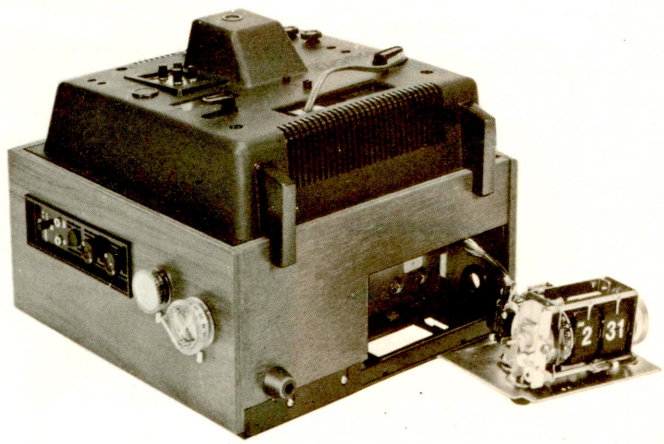


Fig. 2

Cabinet (Main & Rear) Removal

1. Pull out the four control knobs (① and ② in Fig. 3).
2. Remove the channel selector knob, fine tuning knob, UHF tuning knob and UHF dial (③ and ④ in Fig. 3).
3. Remove the five screws (⑤, ⑥, and ⑦ in Fig. 3).
4. Remove the TIME ADJUST knob (① in Fig. 4).
5. Lift up the rear cabinet (Fig. 5).
6. Pull out the main cabinet (Fig. 6).
7. Remove the screw (① in Fig. 6).

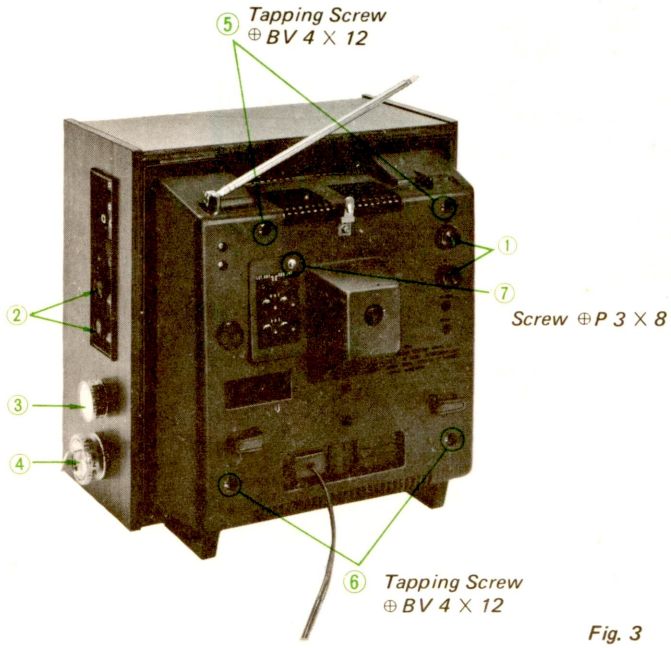


Fig. 3

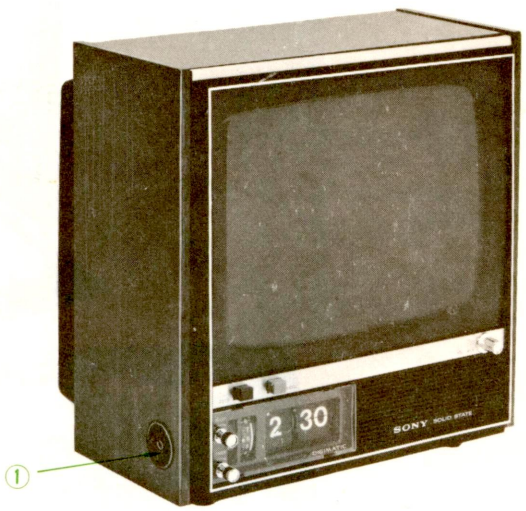


Fig. 4

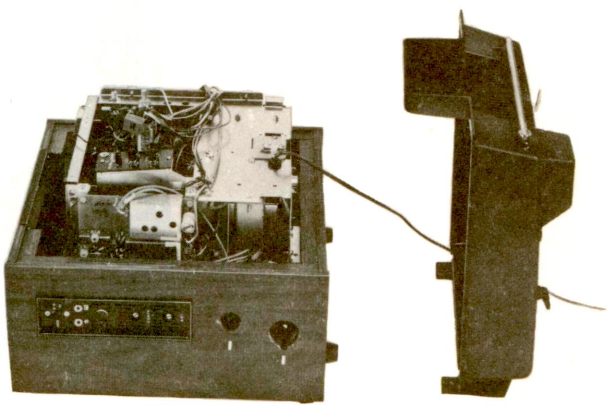


Fig. 5

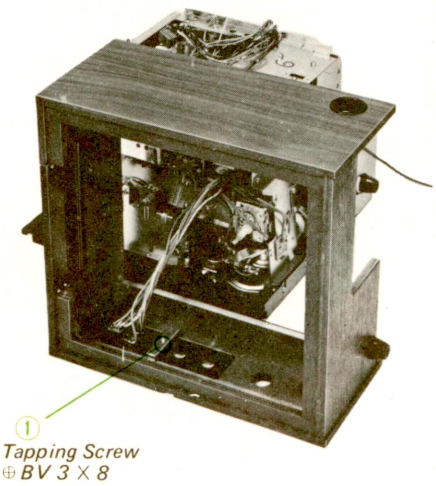


Fig. 6

UHF Tuner Removal

1. Remove the two screws (① in Fig. 7).
2. Disconnect the phono plug (① in Fig. 8).
3. Unsolder all connecting leads from the other section.

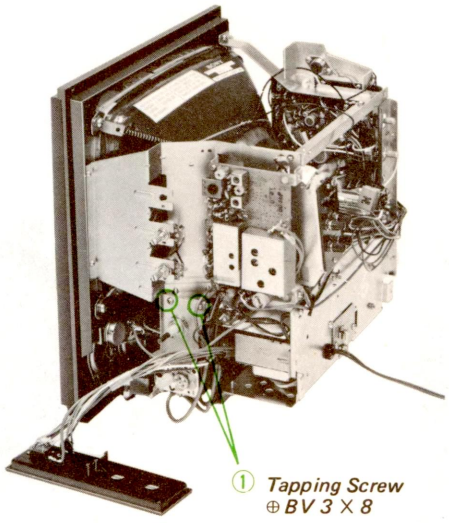


Fig. 7

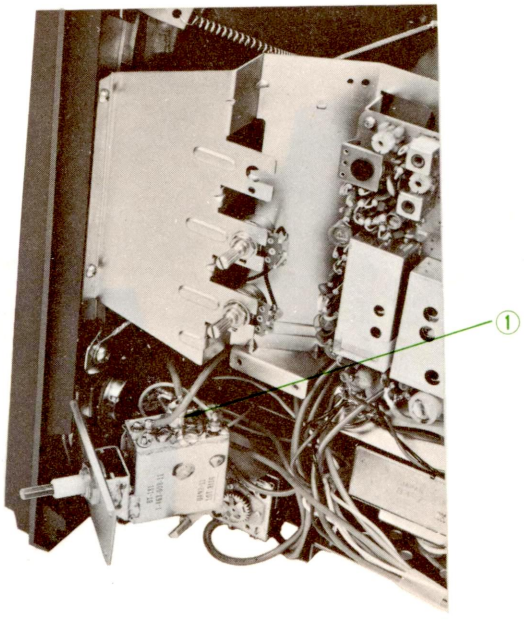


Fig. 8

VHF Tuner Removal

1. Remove the four screws (① and ② in Fig. 9).
2. Remove the VHF tuner block.
3. Remove the three screws (①in Fig. 10).
4. Unsolder all connecting leads from the other seciton.

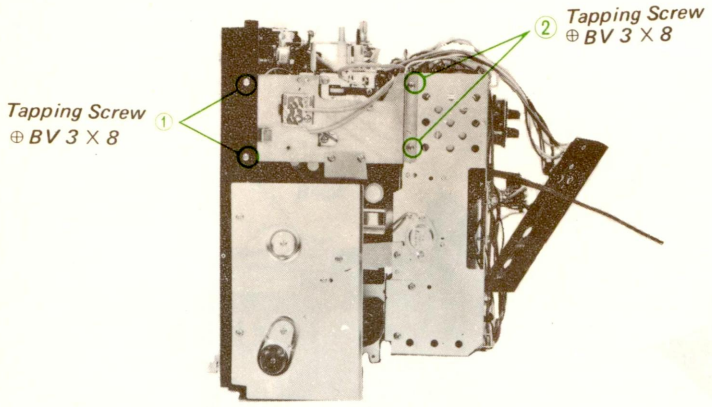


Fig. 9

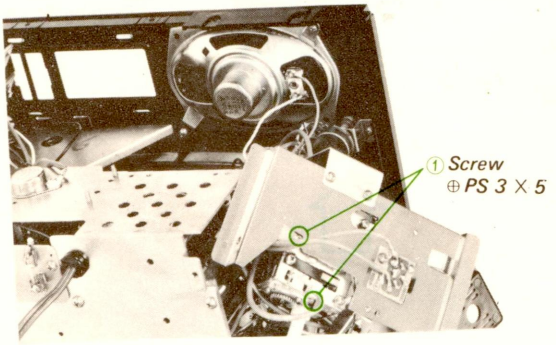


Fig. 10

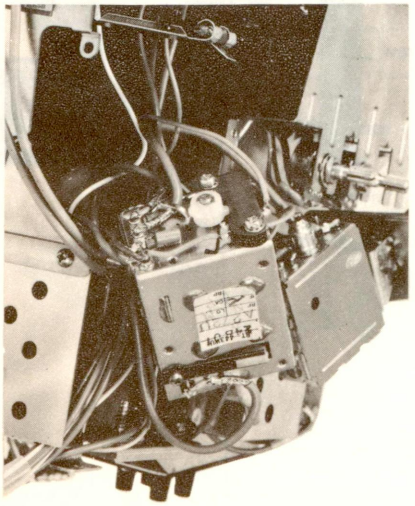


Fig. 11

Sound Circuit Board Removal

1. Remove the three screws (① and ② in Fig. 12).
2. Remove the clock (Fig. 13).
3. Remove a other section (Fig. 14).
4. Unsolder all connecting leads from the screw (① in Fig. 13).

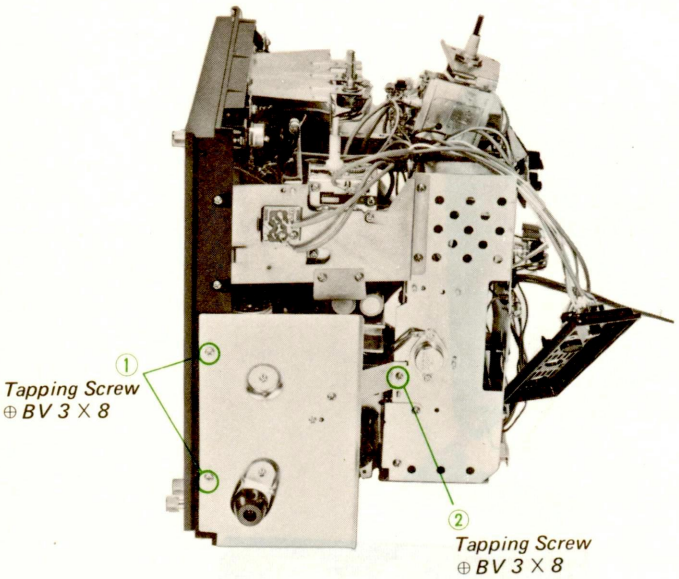


Fig. 12

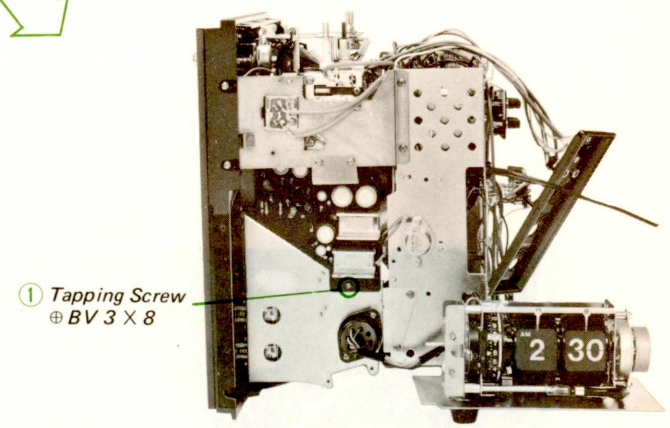


Fig. 13

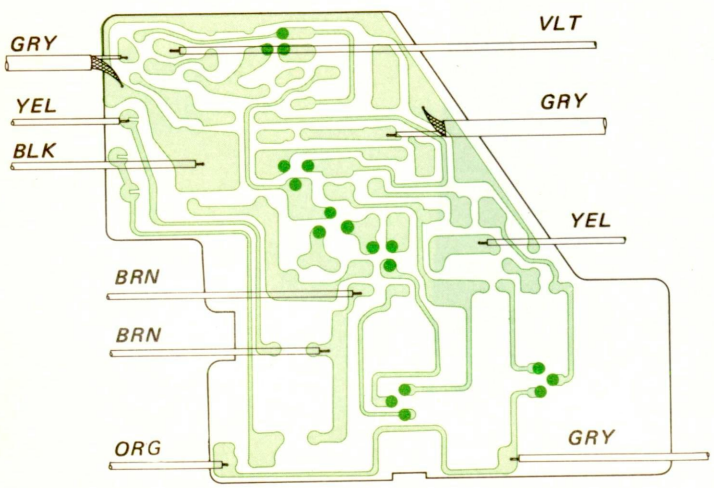


Fig. 14

Deflection Circuit Board Removal

1. Remove the four screws (①in Fig. 15).
2. Disconnect the three connectors (②in Fig. 16).
3. Remove the picture tube socket.
4. Remove the two pin connectors (①in Fig. 16).
5. Unsolder the four leads on the deflection yoke (red, blue, gray and green in Fig. 17).
6. Unsolder the two leads and a shielded cable (②, ③and ④in Fig. 15).
7. Unsolder the picture tube grounding lead from the picture tube socket (⑤in Fig. 15).

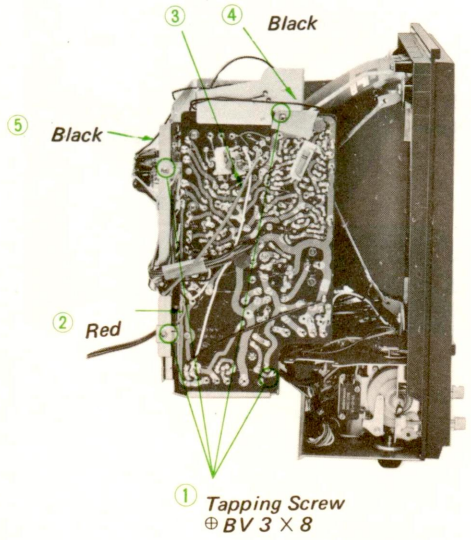


Fig. 15

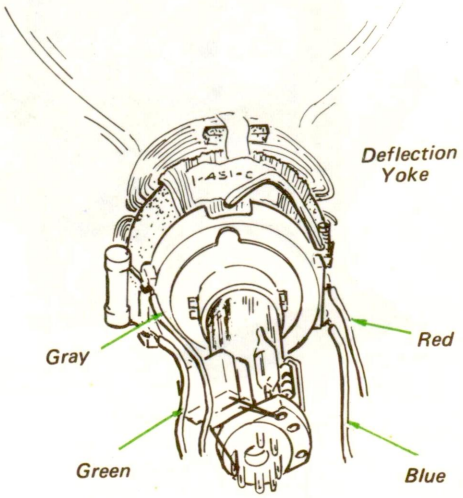


Fig. 17

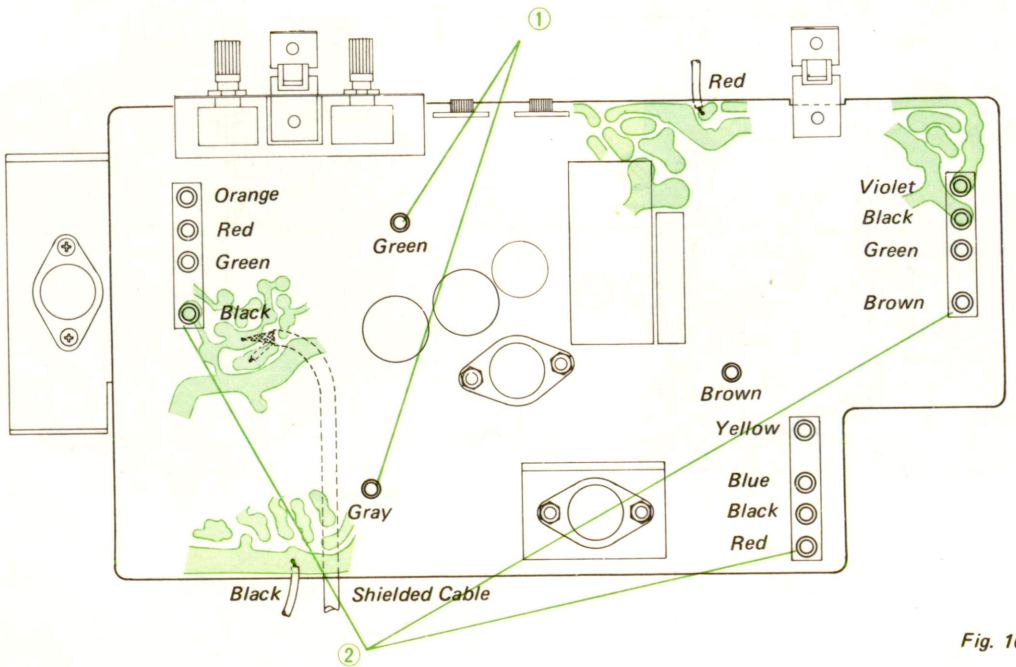


Fig. 16

Signal Circuit Board Removal

1. Remove the four screws (① in Fig. 18).
2. Unsolder the five shielded cables, three leads, and a coaxial cable (Fig. 19).

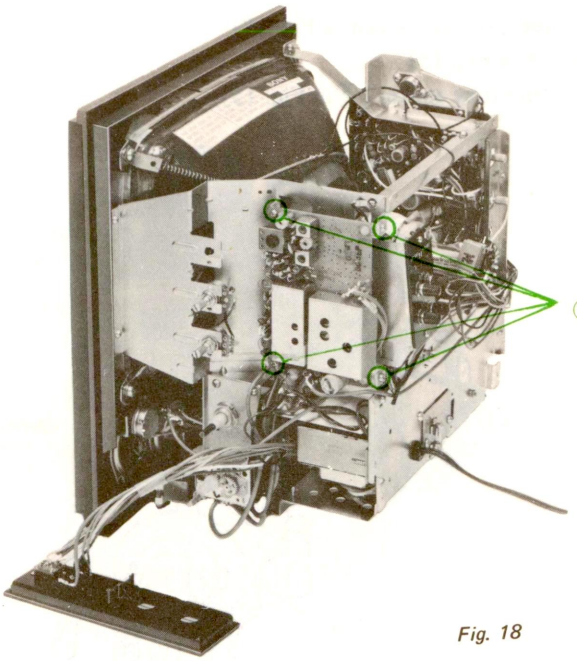


Fig. 18

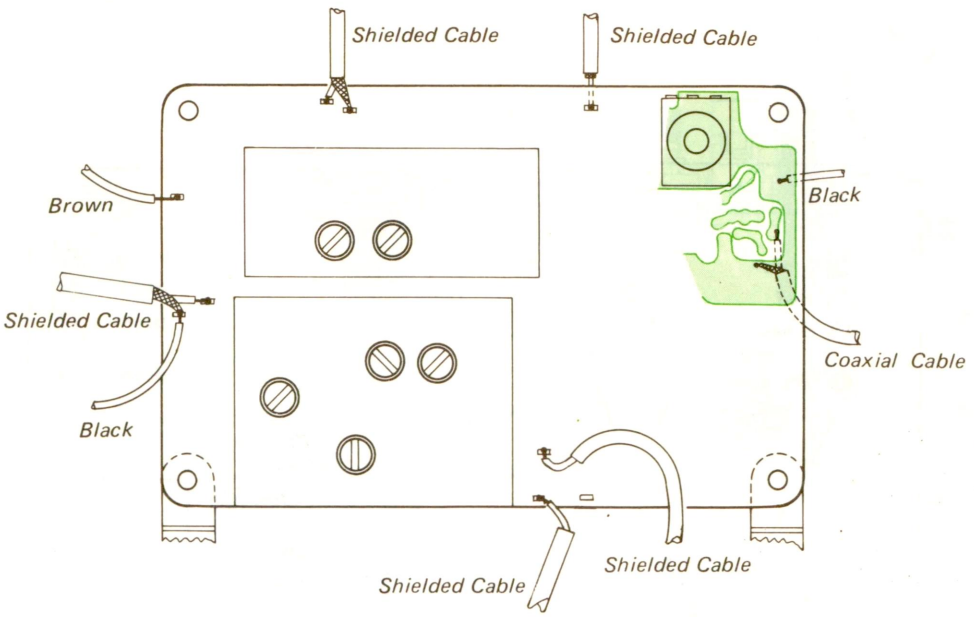


Fig. 19

Push Switch Mounting Plate Removal

1. Remove the clock.
2. Remove the sound circuit board by removing a screw (① in Fig. 20).
3. Remove the two screws (① in Fig. 21).
4. Remove the screw (① in Fig. 22).
5. Unsolder all connecting leads from the other section.

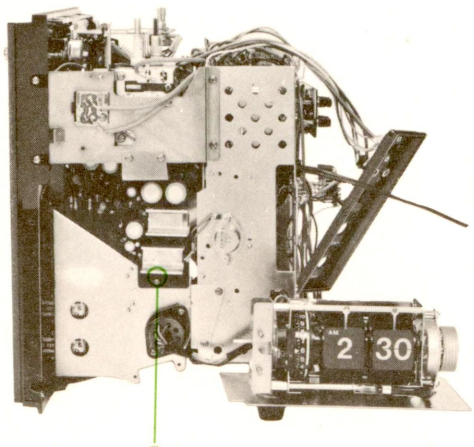


Fig. 20

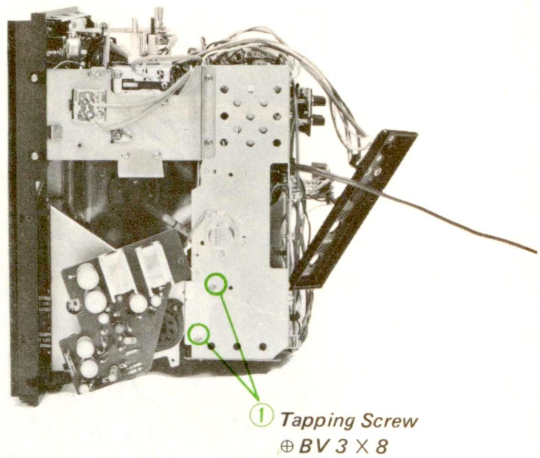


Fig. 21

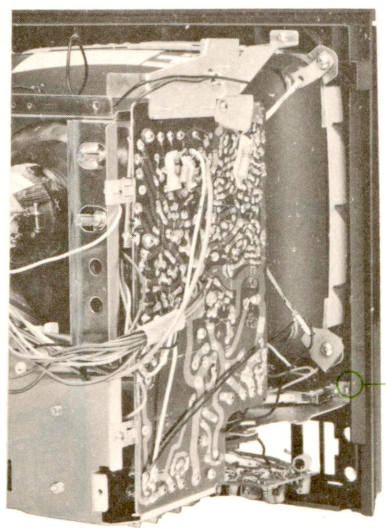


Fig. 22

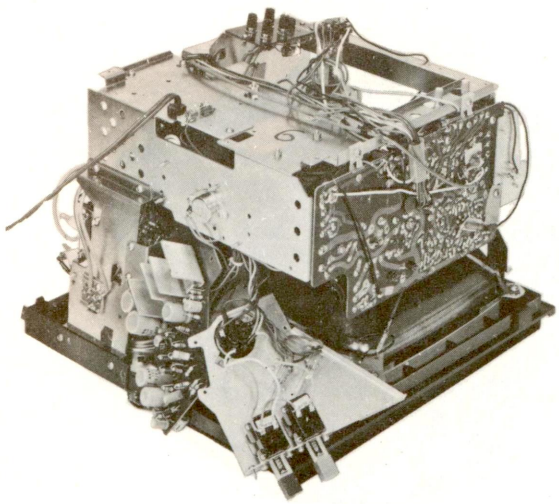


Fig. 23

High Voltage Block Removal

1. Swing the deflection circuit board to the front.
2. Remove the high voltage selenium rectifier.
3. Remove the clock.
4. Remove four screws from the sound circuit board and push-switch mounting plate (Fig. 20, 21 and 22).
5. Remove the two nuts (① in Fig. 24).
6. Pull out the high voltage block (Fig. 25).
7. Unsolder all connecting leads from the other section.

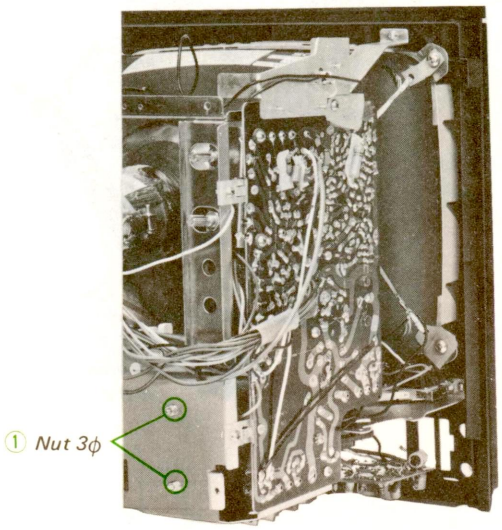


Fig. 24

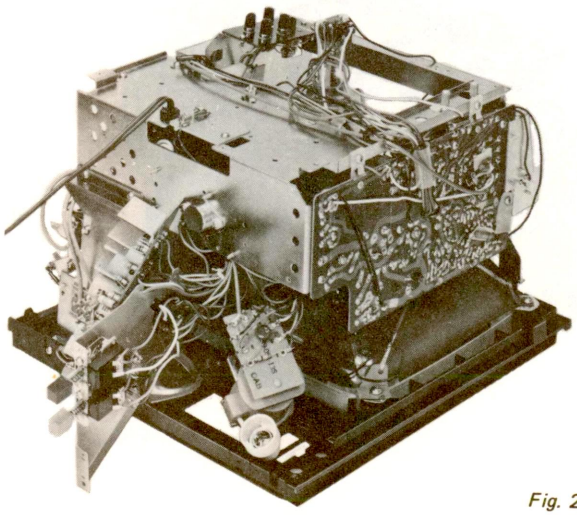


Fig. 25

Speaker Removal

1. Remove the clock, VHF tuner and sound circuit board.
2. Remove the two screws (①in Fig. 26).
3. Unsolder the two leads (②in Fig. 26).

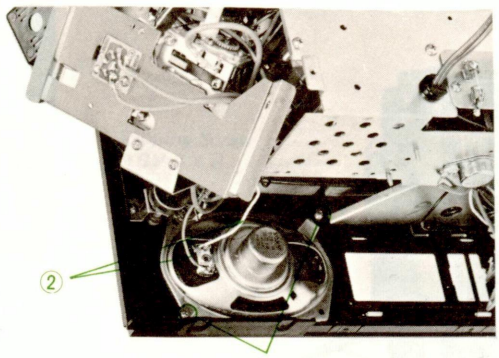


Fig. 26

Glare Filter Removal

To remove the glare filter, press the supplied suction rubber on the filter, and pull the rubber toward you slowly.

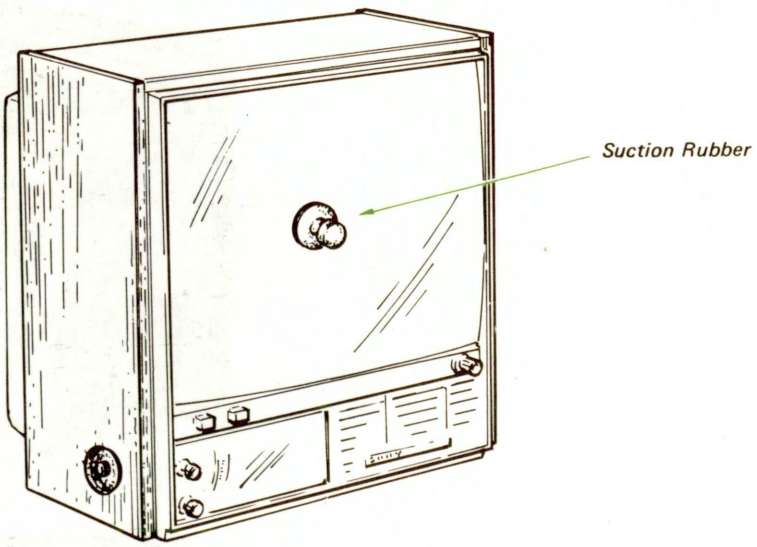


Fig. 27

Chassis Removal

1. Remove the clock (see page 6).
2. Pull off the VOL control knob (① in Fig. 28).
3. Remove the picture tube socket, deflaction yoke, and high-voltage rectifier.
4. Remove the seven screws (① and ② in Fig. 29, ① in Fig. 30, and ① inFig. 31).

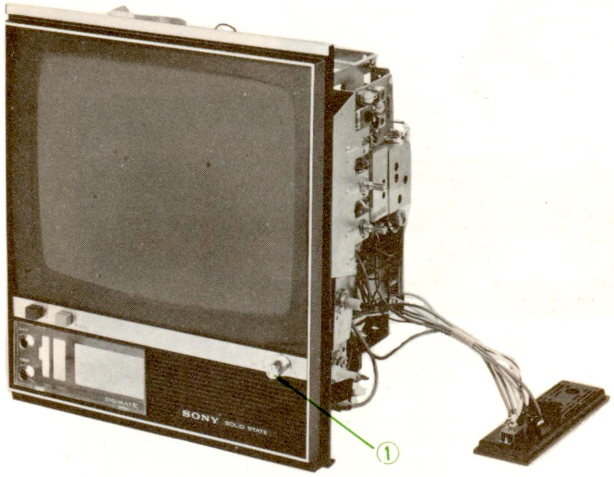


Fig. 28

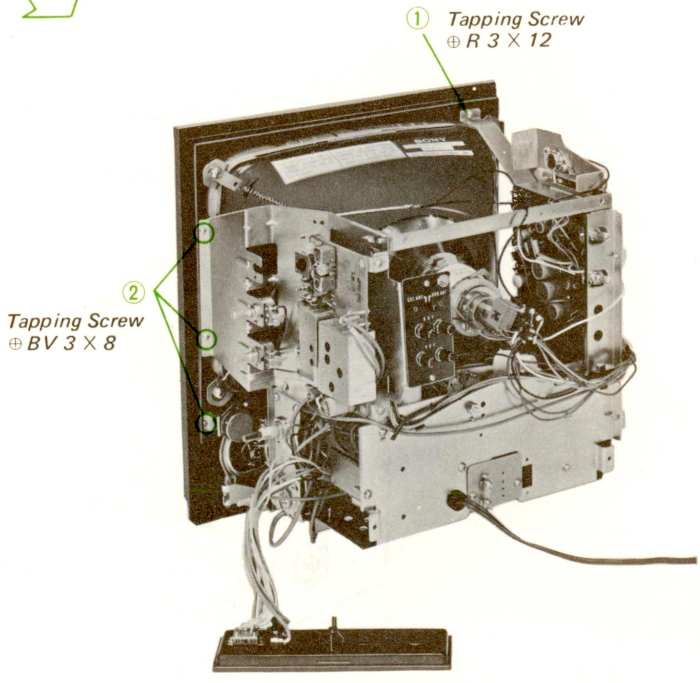
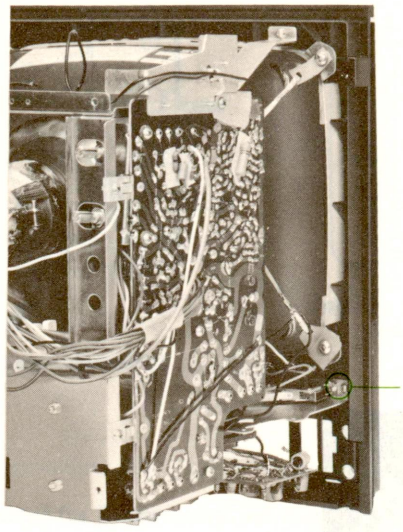


Fig. 29



① Tapping Screw
⊕ BV 3 X 8

Fig. 30

① Tapping Screw
⊕ BV 3 X 8

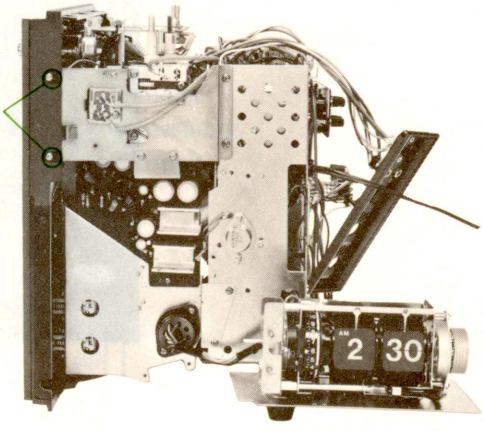


Fig. 31

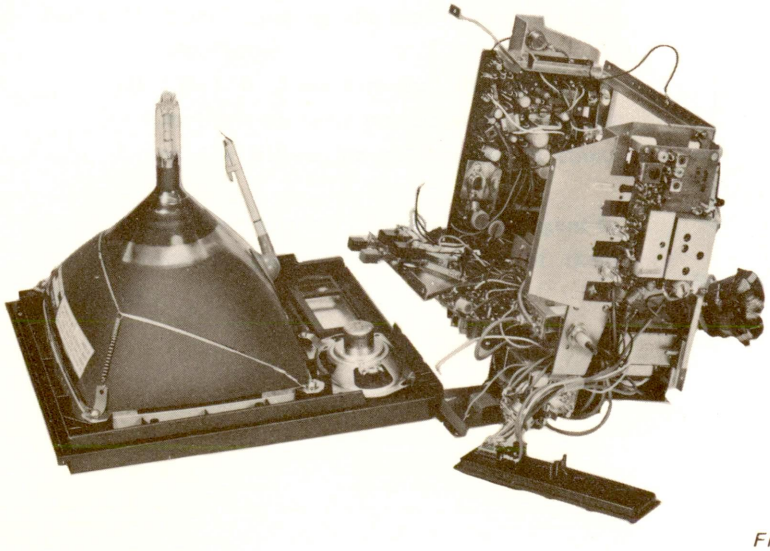


Fig. 32

Picture Tube Removal

1. Remove the chassis.
2. Remove the four screws (① and ② in Fig. 33).
3. Remove the picture tube.

Fig. 33

DIGITAL CLOCK MAINTENANCE

Major Parts Location

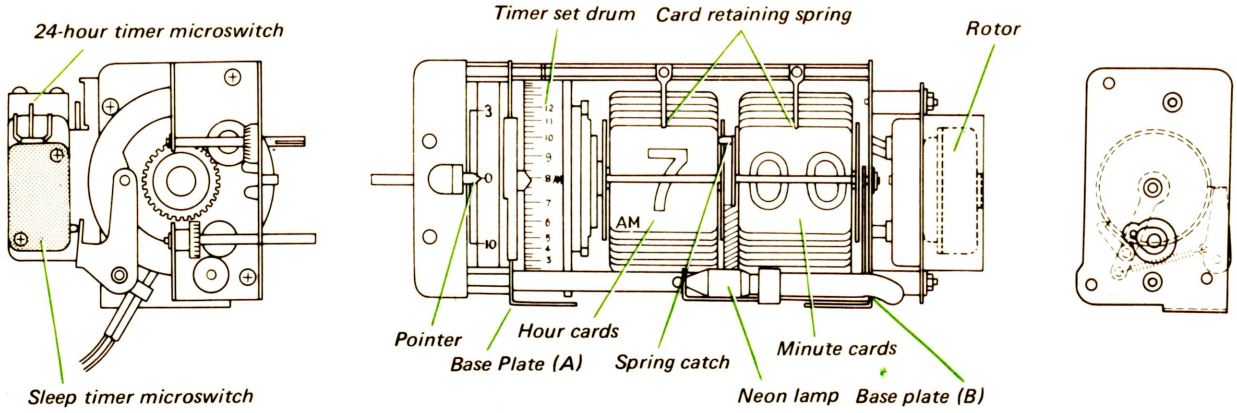


Fig. 34

Precautions for Disassembly and Reassembly

Following are the precautional items to be closely adhered to in disassembling and reassembling the clock:

(1) Wear clean gloves so as not to leave fingerprints and/or grease on the clock parts.

(2) Be sure to hold the clock assembly by gripping the base plates (A) and (B) when removing or reinstalling the clock assembly.

(3) Do not touch the rotor of the motor when handling the clock assembly.

(4) Do not touch the hour and minute cards, spring catch, card retaining springs and pointer.

(5) Be careful not to jar the rotor and pointer when removing or reinstalling the clock assembly.

(6) When installing the clock assembly to the cabinet, tighten its mounting screws uniformly.

Motor Assembly Replacement

(1) Remove two hex nuts (together with plain washers), securing the motor to the bosses. Now, the motor can be removed from the clock assembly.

(2) Install a new motor in place with its rotor side facing outside and secure it by tightening the hex nuts good and tight.

Notes: 1) When installing the motor, keep its lead wires lifted upward.

2) Check to make sure that the cam of the motor is properly positioned with respect to the driven pin of the minute count lever.

(3) Apply an adequate amount of screw-locking agent to the hex nuts to prevent the possibility of them loosening.

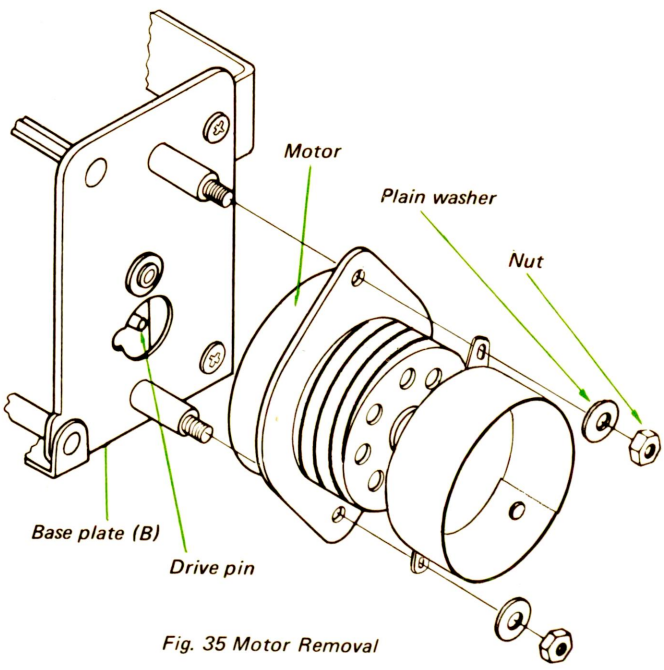


Fig. 35 Motor Removal

Neon Lamp Replacement

(1) The lamp can be removed from the clock assembly by straightening its clamp.

(2) Install a new neon lamp in place by inserting its tip into the hole provided in the support plate. Then, bend up the clamp against the lamp to secure it.

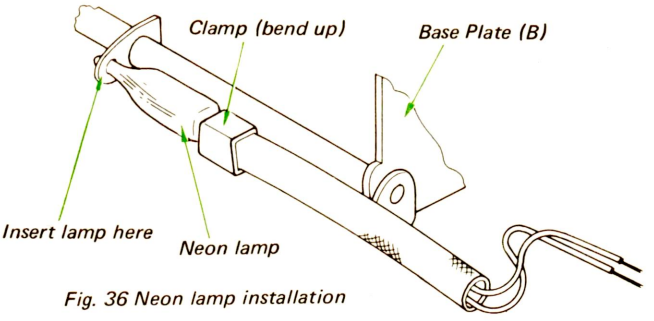


Fig. 36 Neon lamp installation

Microswitch Replacement

(1) 24-hour timer microswitch

This microswitch can be removed for replacement by removing two attaching screws, upper and lower, as shown in Fig. 37. The upper attaching screw is used to secure the microswitch lever shaft also. It is, therefore, necessary to see, upon installing a new switch, if the microswitch lever is properly installed in place.

Check the microswitch operation in the following manner:

a) Finger-rotate the TIMER set knob cw direction, making sure that the switch button (red) is depressed by the spring-loaded microswitch lever when the clutch cam is engaged (moved toward the drum).

b) With the clutch cam kept in engaged position, finger-lift the microswitch lever and release it to see if the lever is spring-returned to depress the switch button properly.

c) Make sure that the microswitch is turned off when the clutch cam is disengaged (moved away from the drum).

Repeat the operation as in Steps a) through c) above at four equal intervals of time to make sure that the switch operates properly.

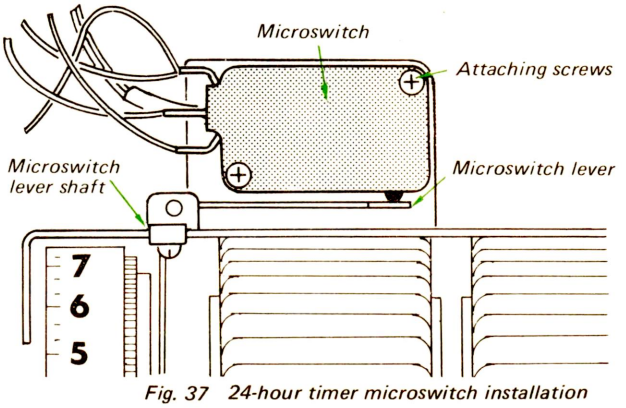


Fig. 37 24-hour timer microswitch installation

(2) Sleep timer microswitch

This microswitch, like the 24-hour timer switch, can easily be replaced by removing two attaching screws. Upon installing, check the switch for proper operation. The switch must be turned on when push the AUTO button and turn the Sleep timer set knob cw to the full.

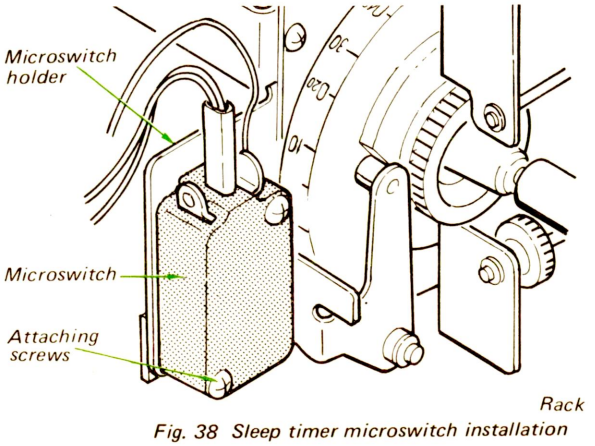


Fig. 38 Sleep timer microswitch installation

Lubrication Guide for Clock Assembly

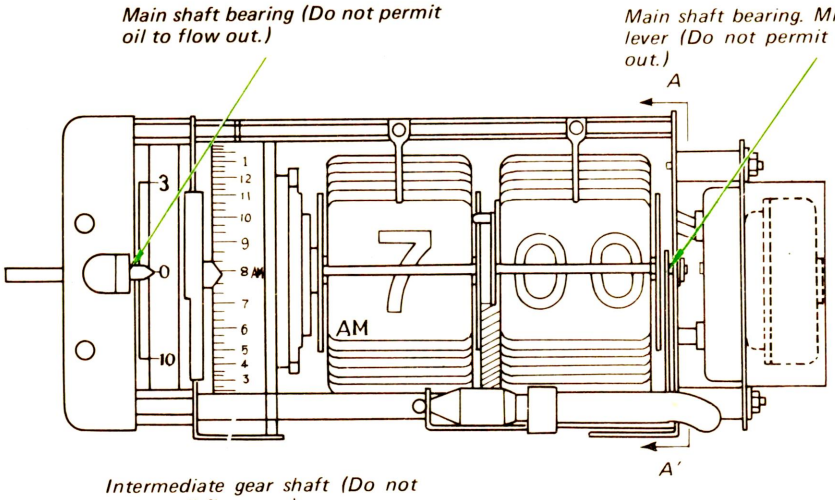

Main shaft bearing (Do not permit oil to flow out.)
Main shaft bearing. Minute count lever (Do not permit oil to flow out.)
A
A'
AM
Intermediate gear shaft (Do not permit oil flow out.)

Fig. 39

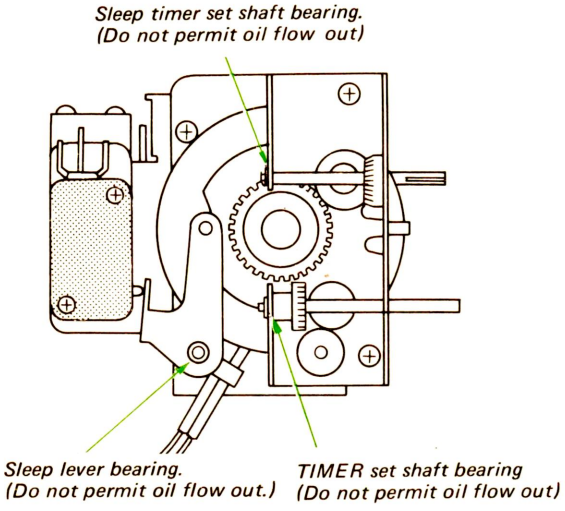

Sleep timer set shaft bearing. (Do not permit oil flow out)
Sleep lever bearing. (Do not permit oil flow out.)
TIMER set shaft bearing (Do not permit oil flow out)

Fig. 40

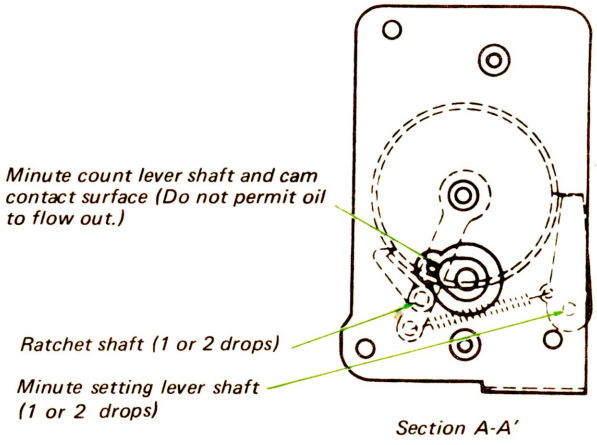

Minute count lever shaft and cam contact surface (Do not permit oil to flow out.)
Ratchet shaft (1 or 2 drops)
Minute setting lever shaft (1 or 2 drops)
Section A-A'

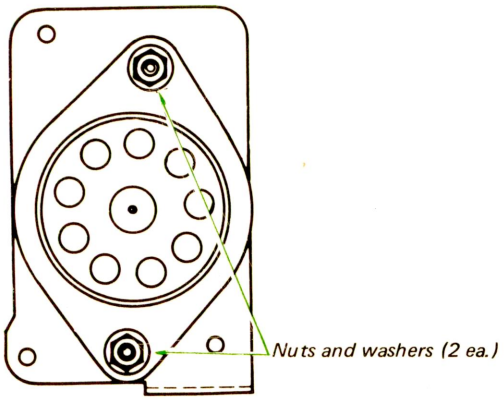
Fig. 41

Notes:

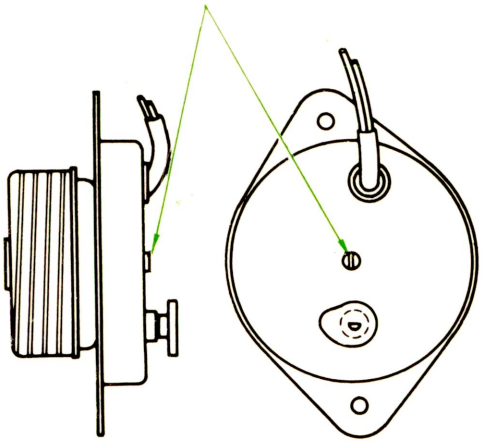
1) Lubricating oil used in Model TVC-111U shipped from SONY is "LAUNA 40" which provides a viscosity index of about 130 and an SAE viscosity rating of 5+0.2W at 98.90°C (210°F). Only oils equivalent to LAUNA 40 must be selected for use in lubricating the clock assembly of Model TVC-111U.
2) Lubricating points must be serviced more than once a year.

Lubrication Guide for Motor Assembly

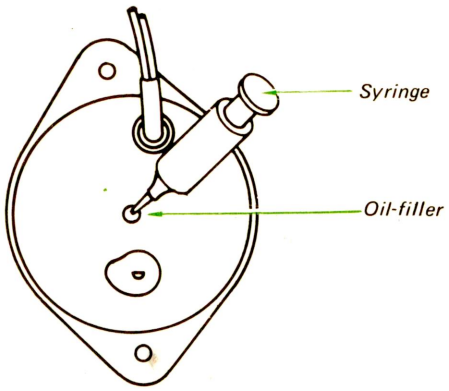
(1) Remove the motor by removing two nuts.



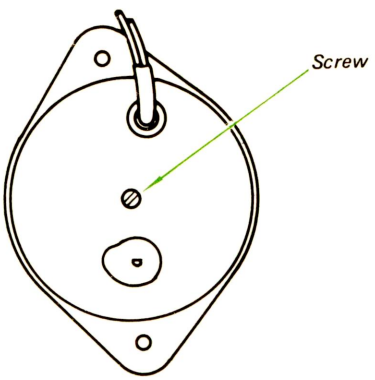
(2) Remove the oil-filler screw as shown.



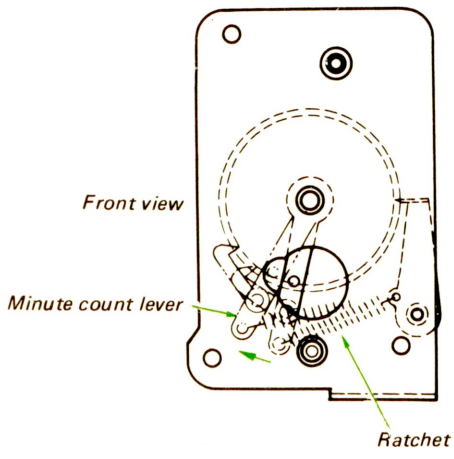
(3) Fill the motor with 0.1 or 0.15cc oil through oil filler by using a brush or syringe.

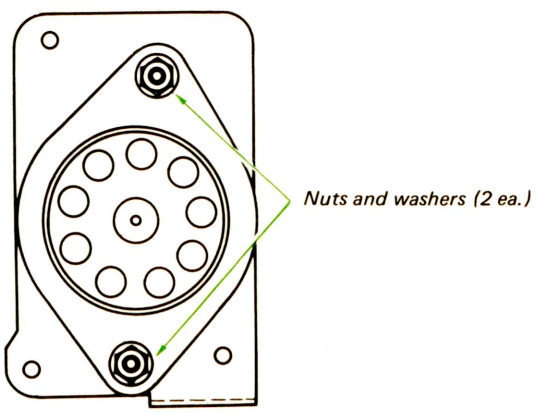


(4) Upon filling oil, reinstall screw, torquing it securely. (Apply sealing agent to screw head to prevent oil from evaporating, if possible).



(5) When installing the motor on the base plate, keep the minute count lever pushed toward the front side of the clock. After installing the motor, make sure that the lever is properly installed, and tighten the nuts.





VIF Adjustments

Preparations:

1. Set the channel selector to the inactive highest channel in the area.
2. Unsolder the keying pulse cable.
3. Connect the oscilloscope to (D) through the noise filter as shown in Fig. 42.

33.75MHz Trap Adjustment:

1. Unsolder the VIF INPUT cable.
2. Connect the signal generator to (E) as shown in Fig. 42 and feed a 33.75 MHz (1kHz 40% AM) signal.
3. Turn the core of L304 (33.75MHz trap coil) for minimum modulated waveform on the scope.

VIF Response Curve Adjustment:

1. Connect 250k ohm variable resistor to (F) in Fig. 44.
2. Connect a VOM to (G) as shown in Fig. 44 and set the 250k ohm variable resistor so that VOM indicates 1.35 to 1.5 volts on the scale.
3. Connect the sweep/marker generator to the tuner's T.P as shown in Fig. 43.
4. Adjust the output of sweep generator so that the point A on the VIF response curve becomes 1.4Vp-p on the oscilloscope as shown in Fig. 45.
5. Repeat the steps in the below table to produce the waveform shown in Fig. 45.

MARKER FREQ. (MHz)	ADJUST	REMARKS
41.25	L301	Set 41.25MHz marker at minimum
47.25	L302	Set 47.25MHz marker at minimum
39.75	L303	Set 39.75MHz marker at minimum
44	T302	Turn for maximum distance between
44	T303	marker and base line

6. Adjust L207 in the tuner when satisfactory VIF response curve is not obtained by foregoing procedures.

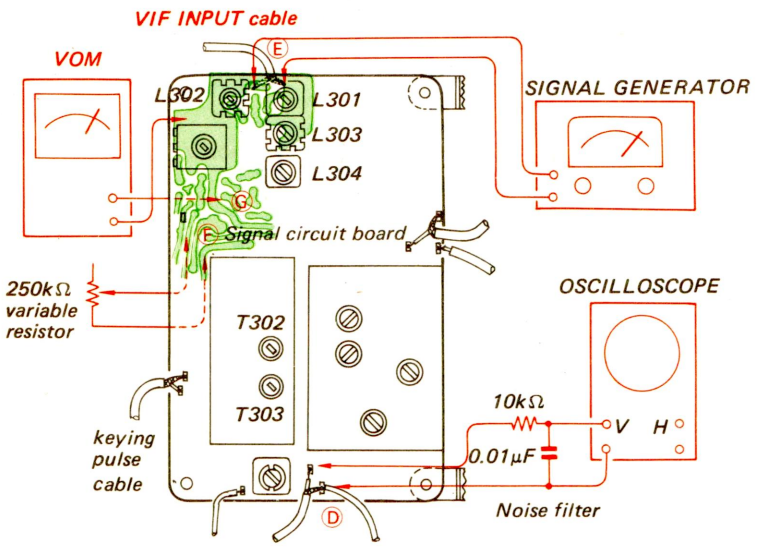


Fig. 42 Equipment connection for VIF adjustment

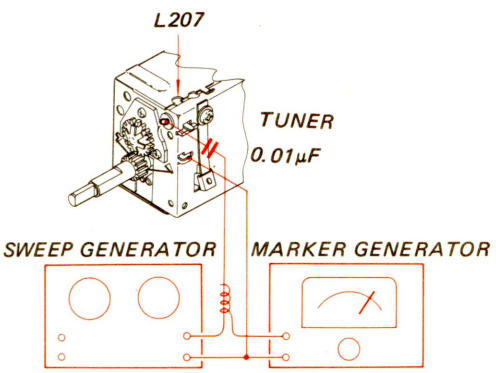


Fig. 43 Sweep/Marker connection

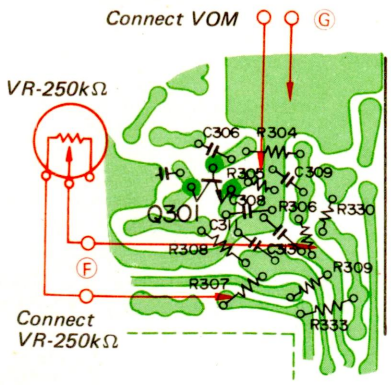


Fig. 44 Location of (F) and (G)

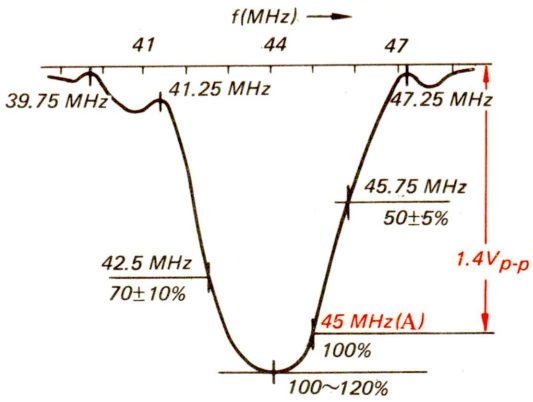


Fig. 45 VIF response curve

DEFLECTION CIRCUIT ADJUSTMENTS

Step	Adjustment for	Preliminary Instruction	Equipment	Connection	Adjust*	Indication
1	Ic of Q501 (Video output)	Set to an inactive channel. Check 12V power supply.	VOM	Across R505	R502 (39k-51kΩ)	For approx. 43.5V reading.
2	Ic of Q703 (Vert. output)	Lock in Sync. Check 12V power supply.	VOM	Across R714	R717 (1k-2.2kΩ)	For approx. 0.45V reading.
3	Vert. Height and Linearity	Receive a test pattern.			VR702 (Vert. Linearity) VR703 (Vert. Height)	For optimum vertical height and linearity on the picture.
4	Horizontal Pulse Width	Lock in sync.	Oscillo-scope	Emitter of Q801	C815 (0.0022-0.01μF)	Short the HSC. For 12.5-13.5μsec. (See Fig. 4)
5	HSC (Horizontal Stability Coil)	Lock in sync. Receive a test pattern.			HSC	So that the picture is stable in either case whether HSC is shorted or normal.
6	Ic of Q802 (Hor. drive)	Lock in Sync. Brightness control to optimum positions.	Ammeter	Collector of Q802	R806 (2.2-33Ω)	For 52-58mA reading.
7	Horizontal Frequency	Receive a test pattern. Set the contrast and brightness controls to optimum positions.			VR601 (Hor. Freq.)	Adjust VR601 so that the numbers of diagonal bars are the same for both extreme clockwise and counterclockwise settings of VR602.

* Select values between those shown.

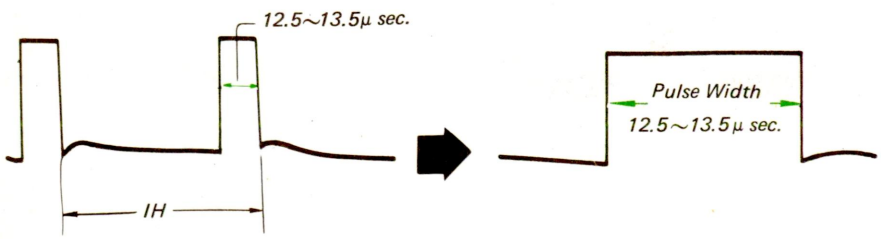


Fig. 46 Horizontal pulse width

ADJUSTMENT PROCEDURE

SIF Adjustments

Unsolder the VIF INPUT coaxial cable first.
Remove the SIF and VIF shield covers.
Equipment setup is shown in Fig. 47

ITEMS	EQUIPMENT CONNECTION	ADJUST	REMARKS
4.5 MHz Trap	SIGNAL GENERATOR ..... Ⓐ Signal: 4.5MHz (400Hz 30% AM)	L402	Turn the core of L402 to eliminate the stripe from the picture as shown in Fig. 49.
T401 T402 T403	SIGNAL GENERATOR ..... Ⓐ Signal: 4.5MHz (400Hz 30% AM) VOM ..... Ⓑ Range: DC 0.5V or 1.5V OSCILLOSCOPE ..... Ⓒ	T401 T402 T403(primary)	Adjust for maximum indication on the VOM.
		T403 (secondary)	Adjust for minimum modulated waveform.
Confirmation of S curve	SWEEP/MARKER GENERATOR. Ⓐ Freq.: 4.5MHz OSCILLOSCOPE ..... Ⓒ	T401 T402 T403	Turn up sweep generator output to produce an S curve. If an S curve is not symmetrical as illustrated in Fig. 50, adjust T401, T402 and T403 for best result.

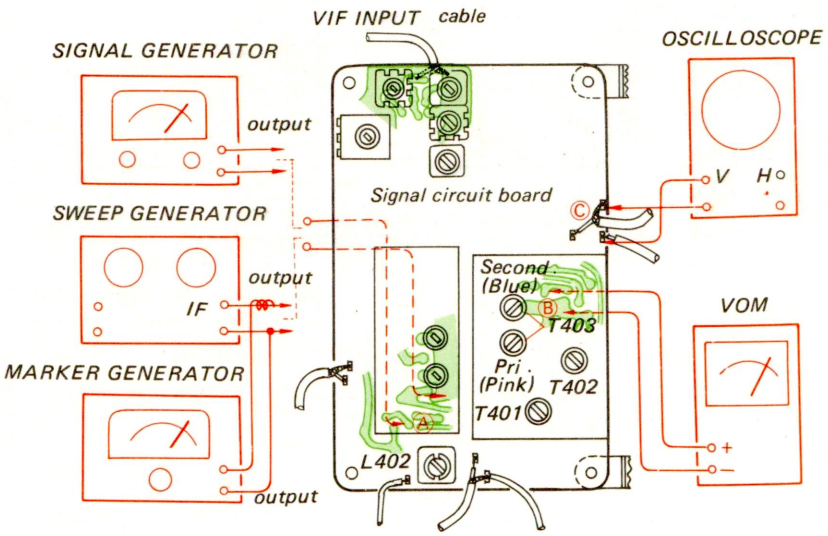


Fig. 47 Equipment connection for SIF adjustment

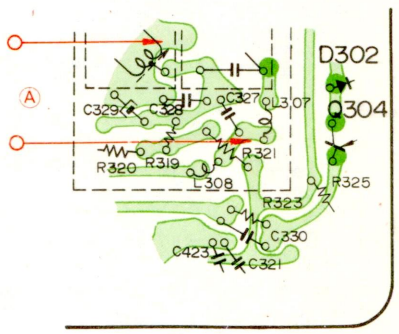


Fig. 48 Location of Ⓐ

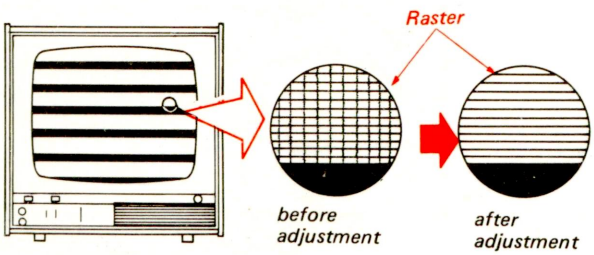


Fig. 49 4.5 MHz trap adjustment

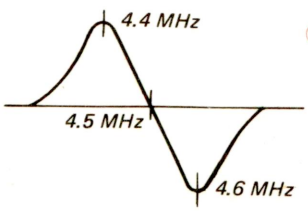


Fig. 50 SIF adjustment curve

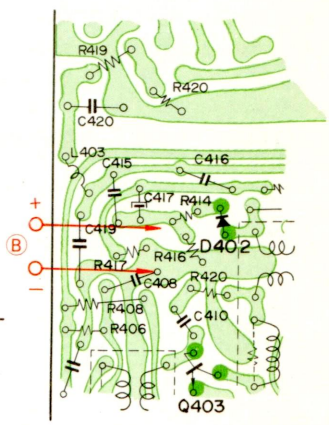
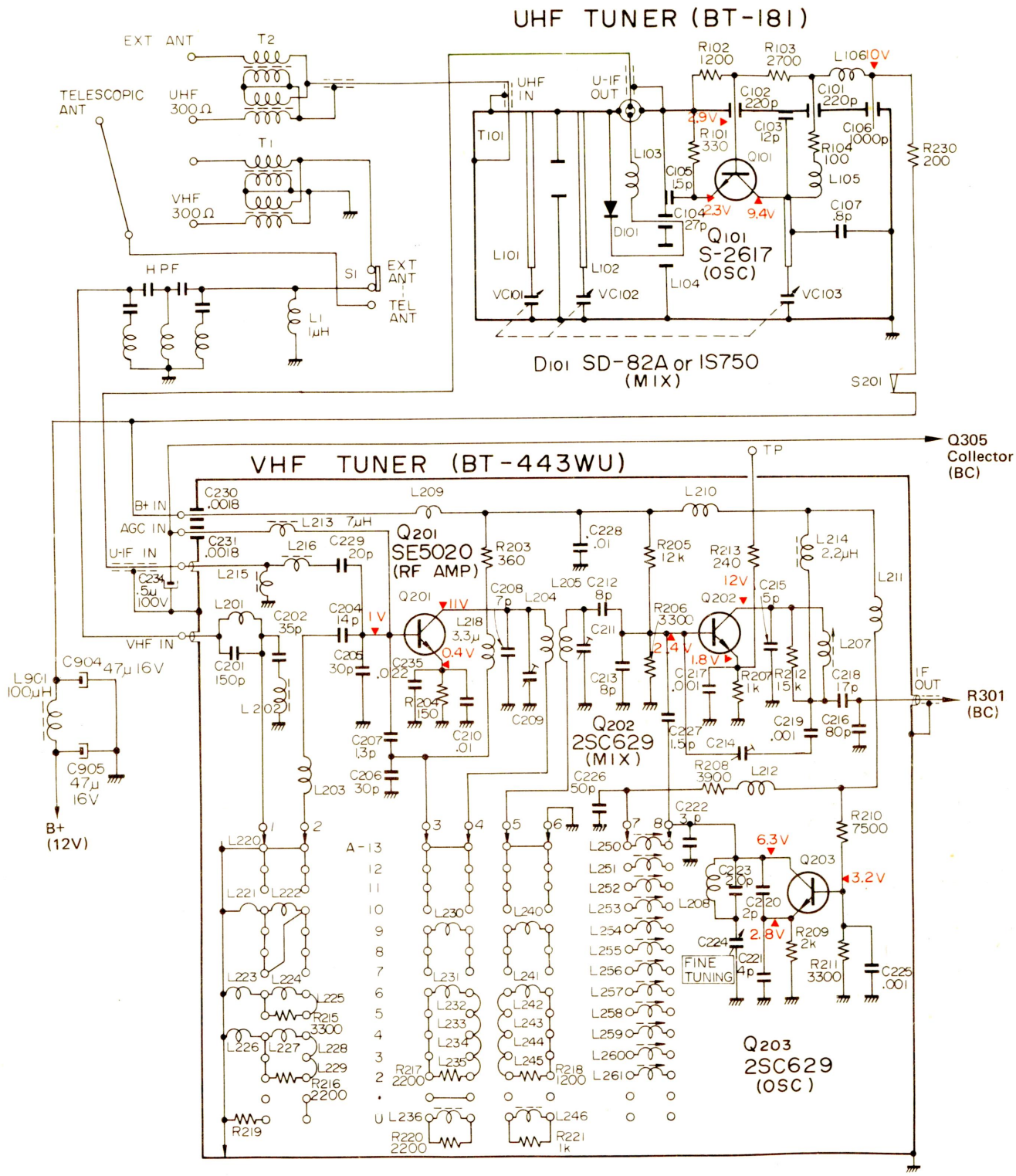


Fig. 51 Location of Ⓑ

SCHEMATIC DIAGRAM

VHF Tuner Circuit

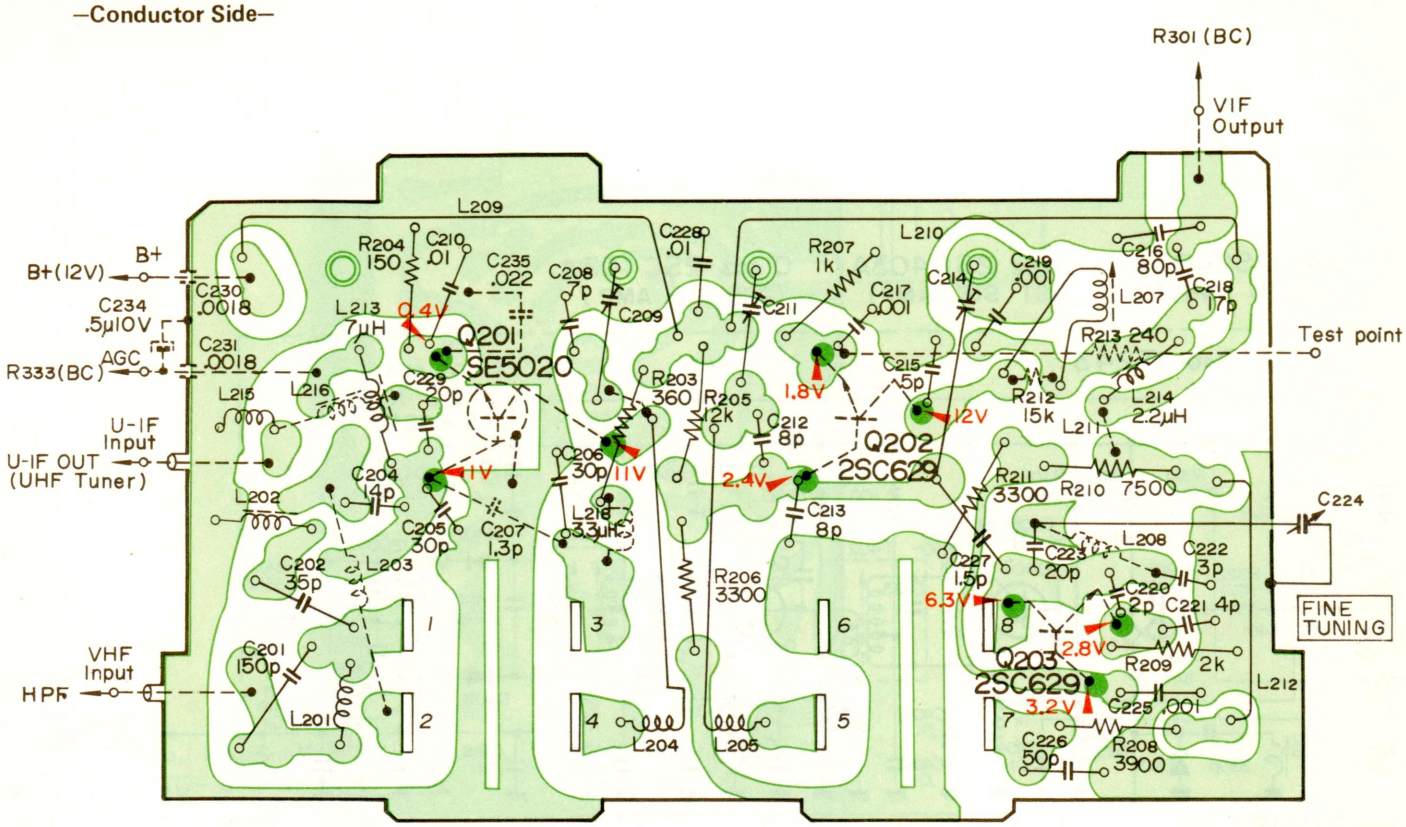


☆ Voltages measured from chassis to point indicated with a VOM (20k-ohm/V), with no signal input.

MOUNTING DIAGRAM

VHF Tuner Circuit Board

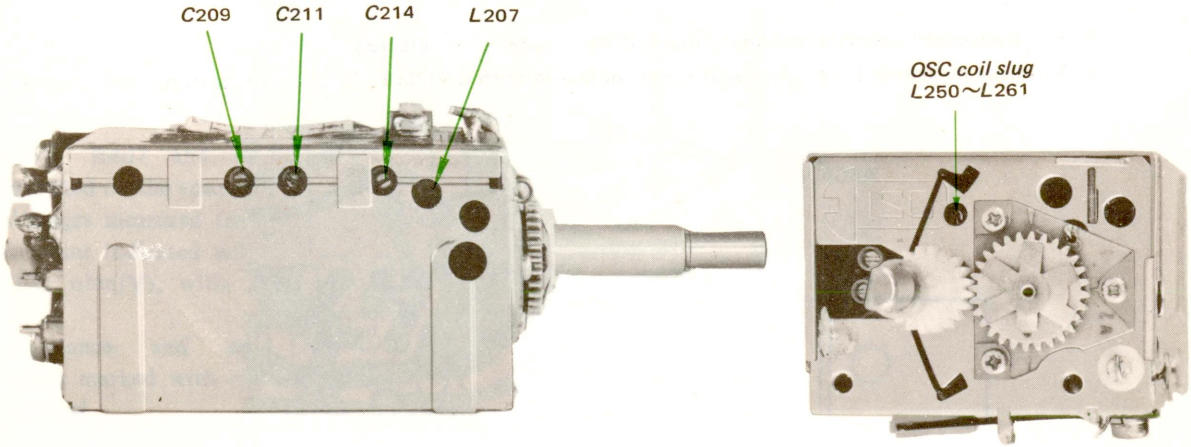
—Conductor Side—



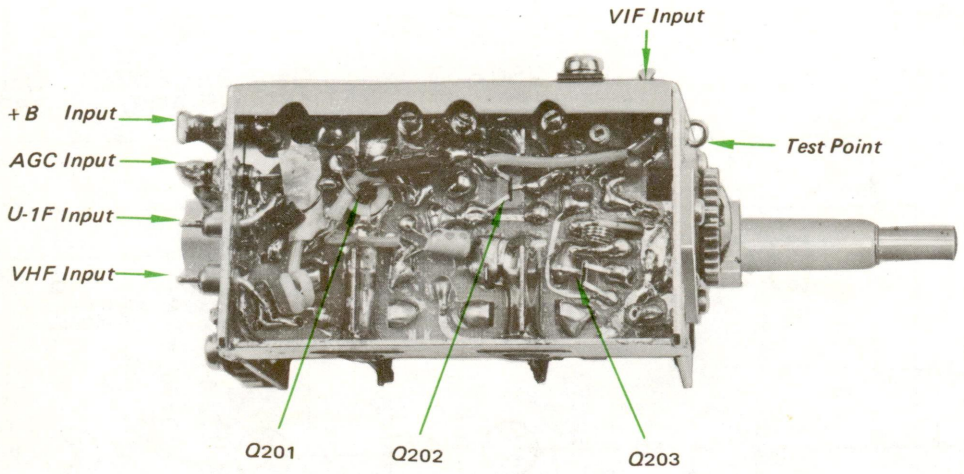
☆ The following components are mounted on the conductor side.
(Q201 Q202, Q203, L208, L211, L216, L218, C207, C235, R212 and R213)

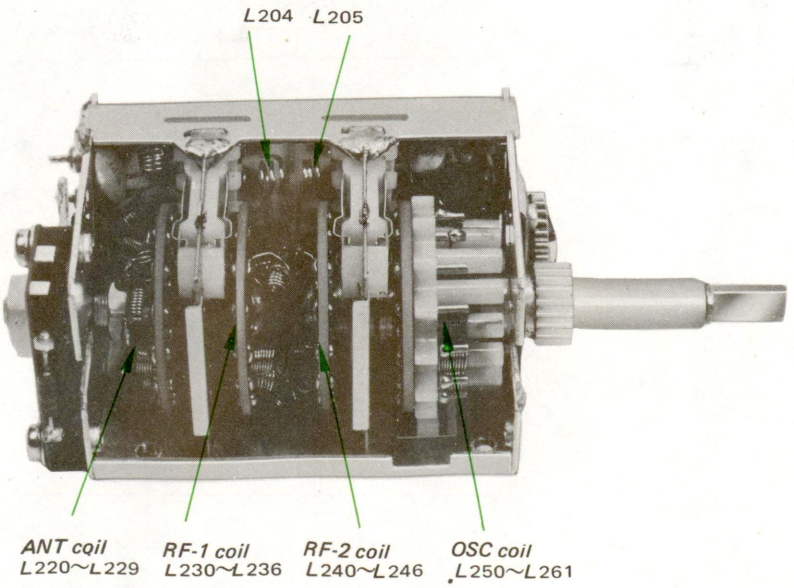
☆ Voltages measured from chassis to point indicated with a VOM (20k ohm/V), with no signal input.

Parts Location



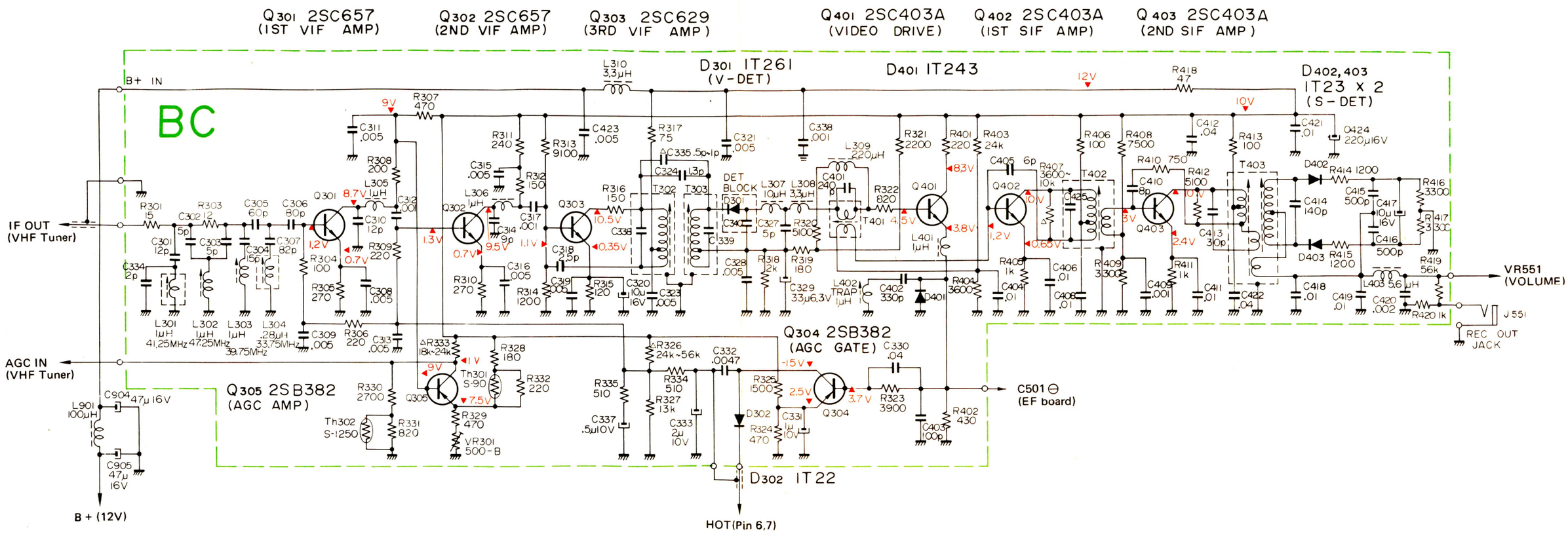
Parts Location





SCHEMATIC DIAGRAM

SIGNAL CIRCUIT



☆ Resistance and capacitance values marked with △ are to be selected.

☆ Voltages measured from chassis to point indicated with a VOM (20k ohm/V), with no signal input.

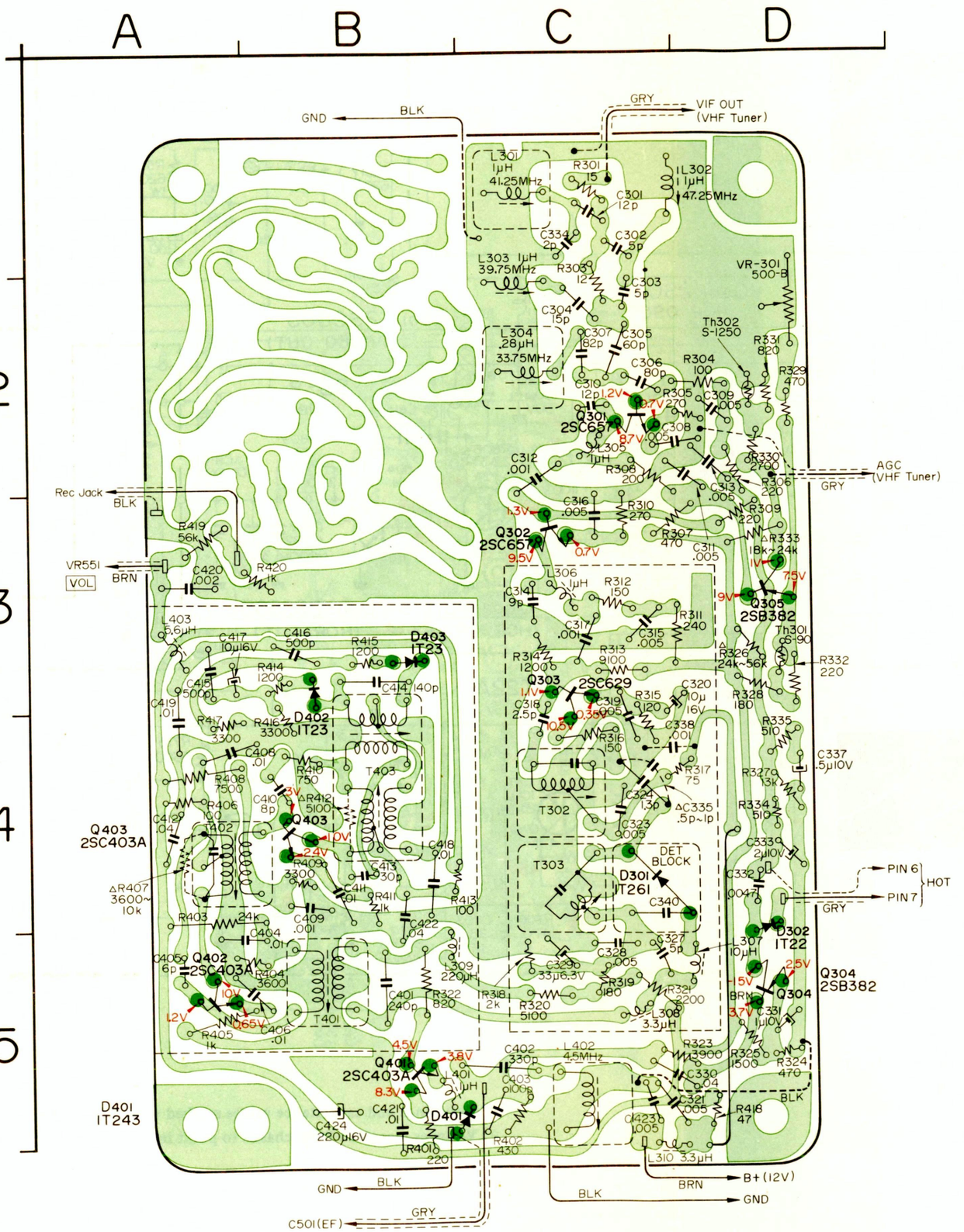
MOUNTING DIAGRAM

Signal Circuit Board (BC)

– Conductor Side –

Symbol No.	Location
Q301	C - 2
Q302	C - 3
Q303	C - 3
Q304	D - 5
Q305	D - 3
Q401	B - 5
Q402	A - 5
Q403	B - 4
D302	D - 4,5
D401	B C - 5
D402	B - 3
D403	B - 3
VR-301	D - 2

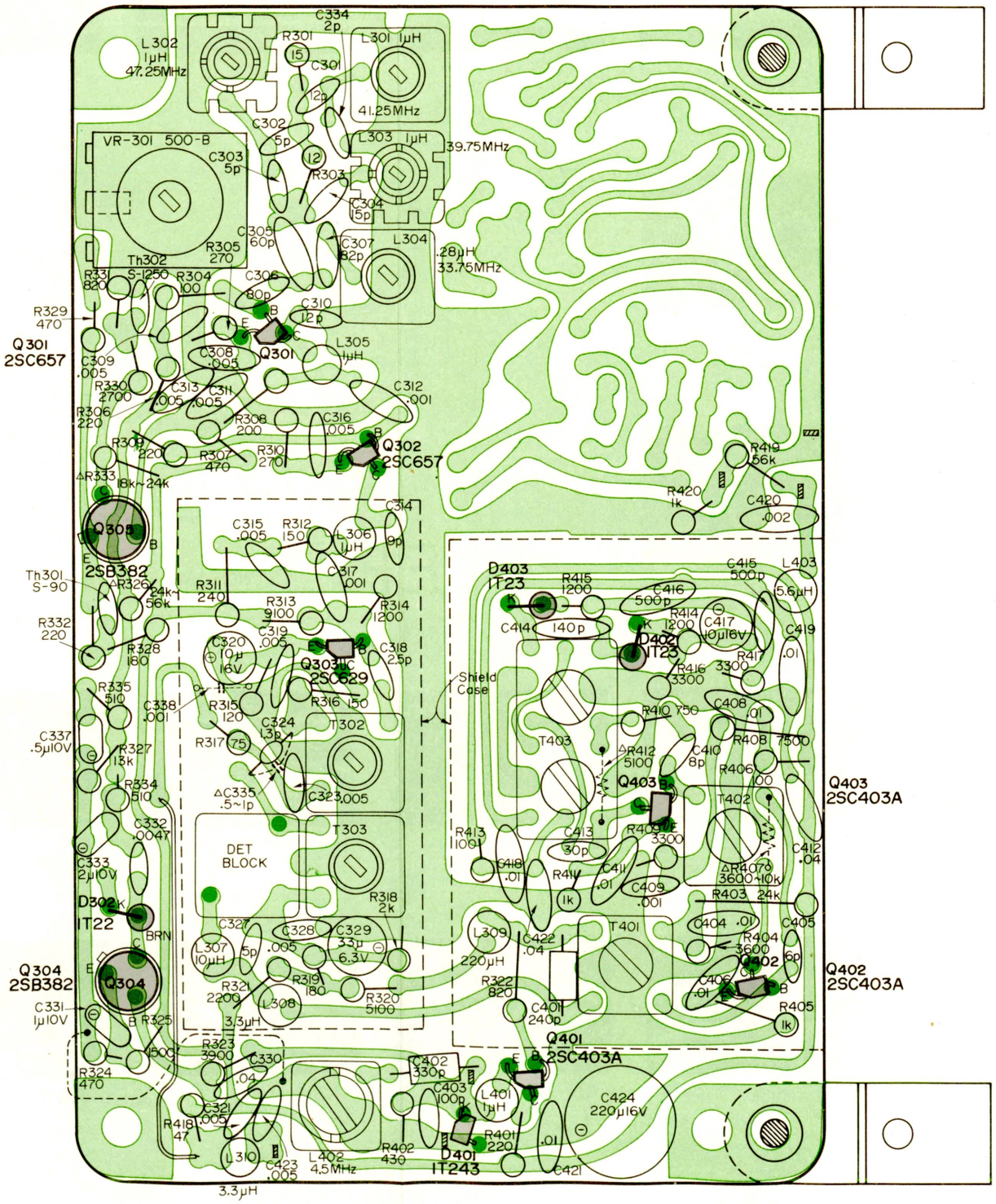
C338, R407 and R412 are mounted on the conductor side.
Voltages measured from chassis to point indicated with a VOM (20k ohm/V), with no signal input.
Resistance and capacitance values marked with △ are to be selected.



MOUNTING DIAGRAM

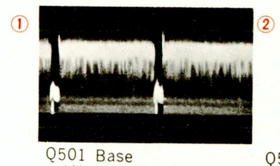
Signal Circuit Board (BC)

– Component Side –



SCHEMATIC DIAGRAM

DEFLECTION CIRCUIT



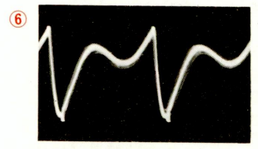
① Q501 Base
1Vp-p —V—

② Q501 Collector
80Vp-p —V— (Contrast max.)

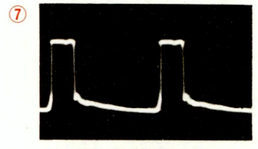
③ Q601 Collector
11Vp-p —V—

④ Q602 Collector
12Vp-p —V—

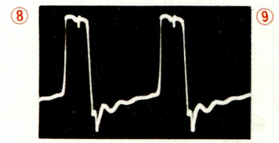
⑤ D601 Cathode
14Vp-p —H—



⑥ HBT input side
2Vp-p —H—



⑦ Q801 Emitter
15Vp-p —H—



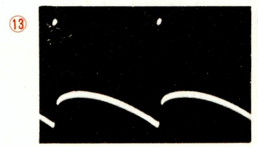
⑧ Q802 Base
2.5Vp-p —H—

⑨ Q802 Collector
17Vp-p —H—

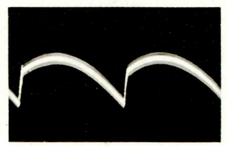
⑩ Q803 Base
6.5Vp-p —H—

⑪ Q803 Collector
250Vp-p —H—

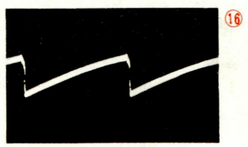
⑫ Q701 Base
11.5Vp-p —V—



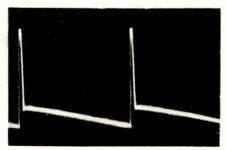
⑬ Q701 Collector
6Vp-p —V—



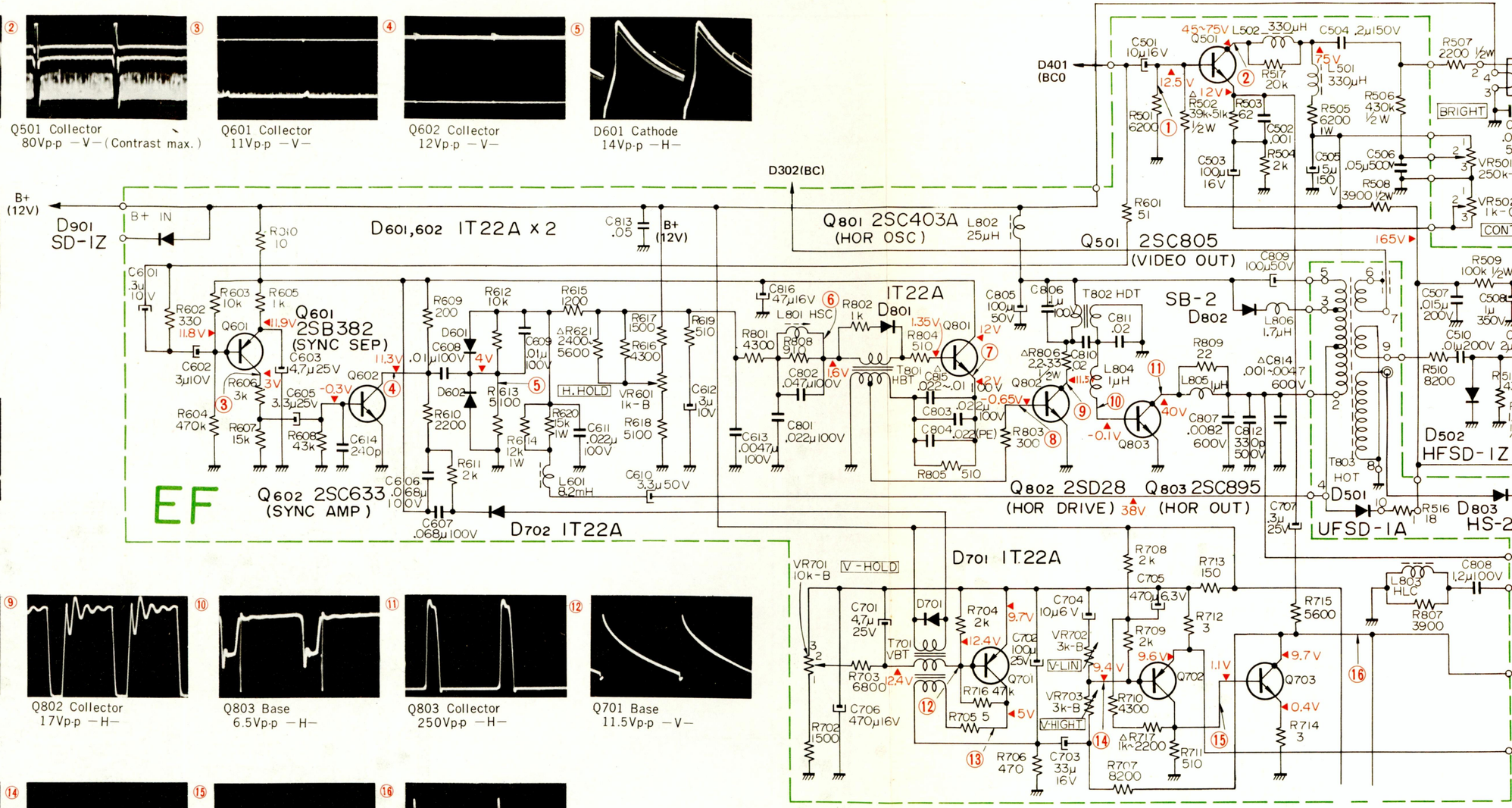
⑭ Q702 Base
1.3Vp-p —V—



⑮ Q703 Base
1.1Vp-p —V—

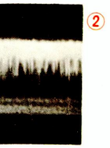


⑯ Q703 Collector
58Vp-p —V—



☆ Resistance and capacitance values marked with △ are to be selected.

☆ Voltages measured from chassis to point indicated with a VOM (20k o



②

Q501 Collector
80Vp-p —V— (Contrast max.)

③

Q601 Collector
11Vp-p —V—

④

Q602 Collector
12Vp-p —V—

⑤

D601 Cathode
14Vp-p —H—

⑨

Q802 Collector
17Vp-p —H—

⑩

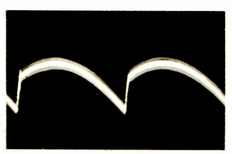
Q803 Base
6.5Vp-p —H—

⑪

Q803 Collector
250Vp-p —H—

⑫

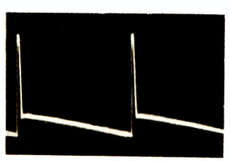
Q701 Base
11.5Vp-p —V—

⑭ 

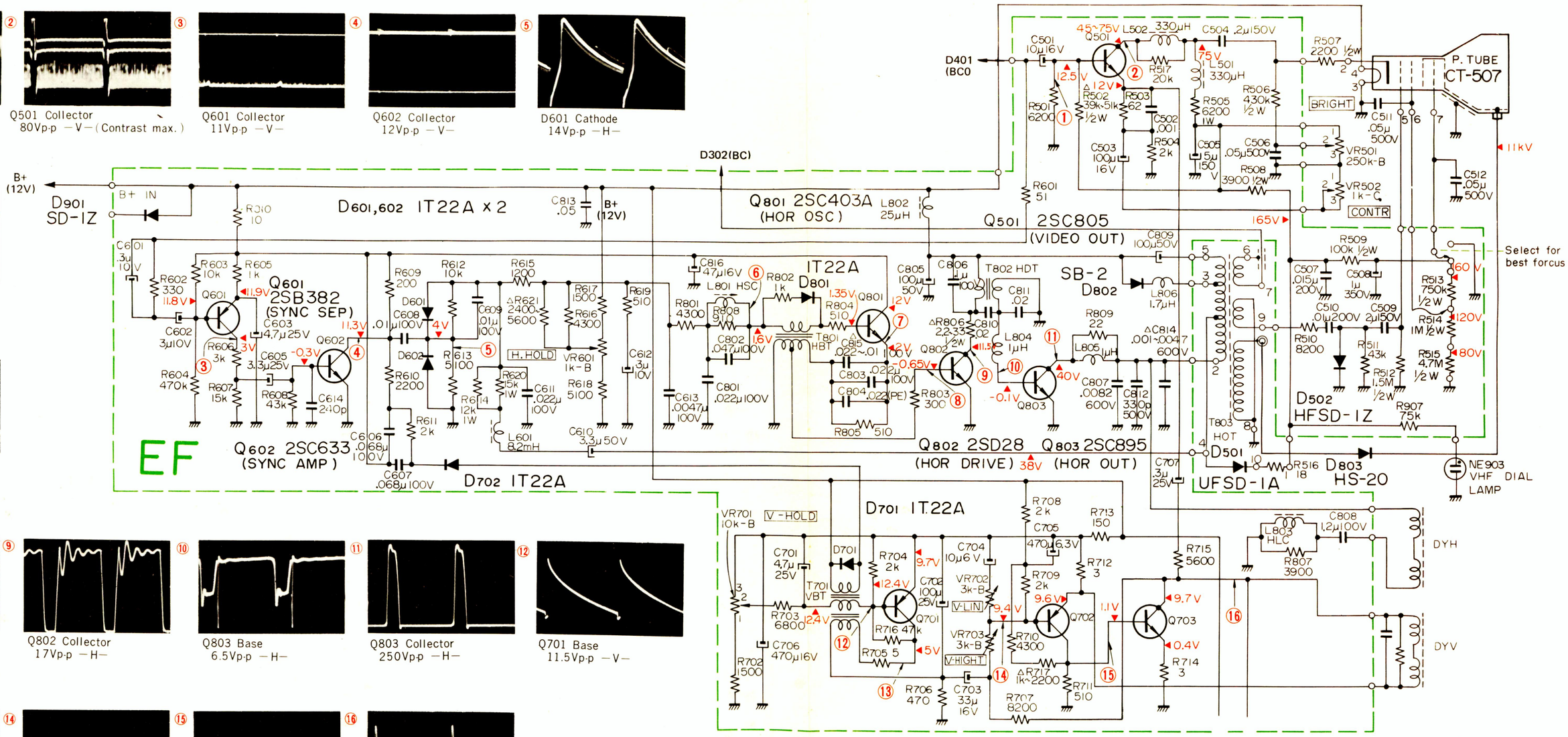
Q702 Base
1.3Vp-p —V—

⑮

Q703 Base
1.1Vp-p —V—

⑯ 

Q703 Collector
58Vp-p —V—



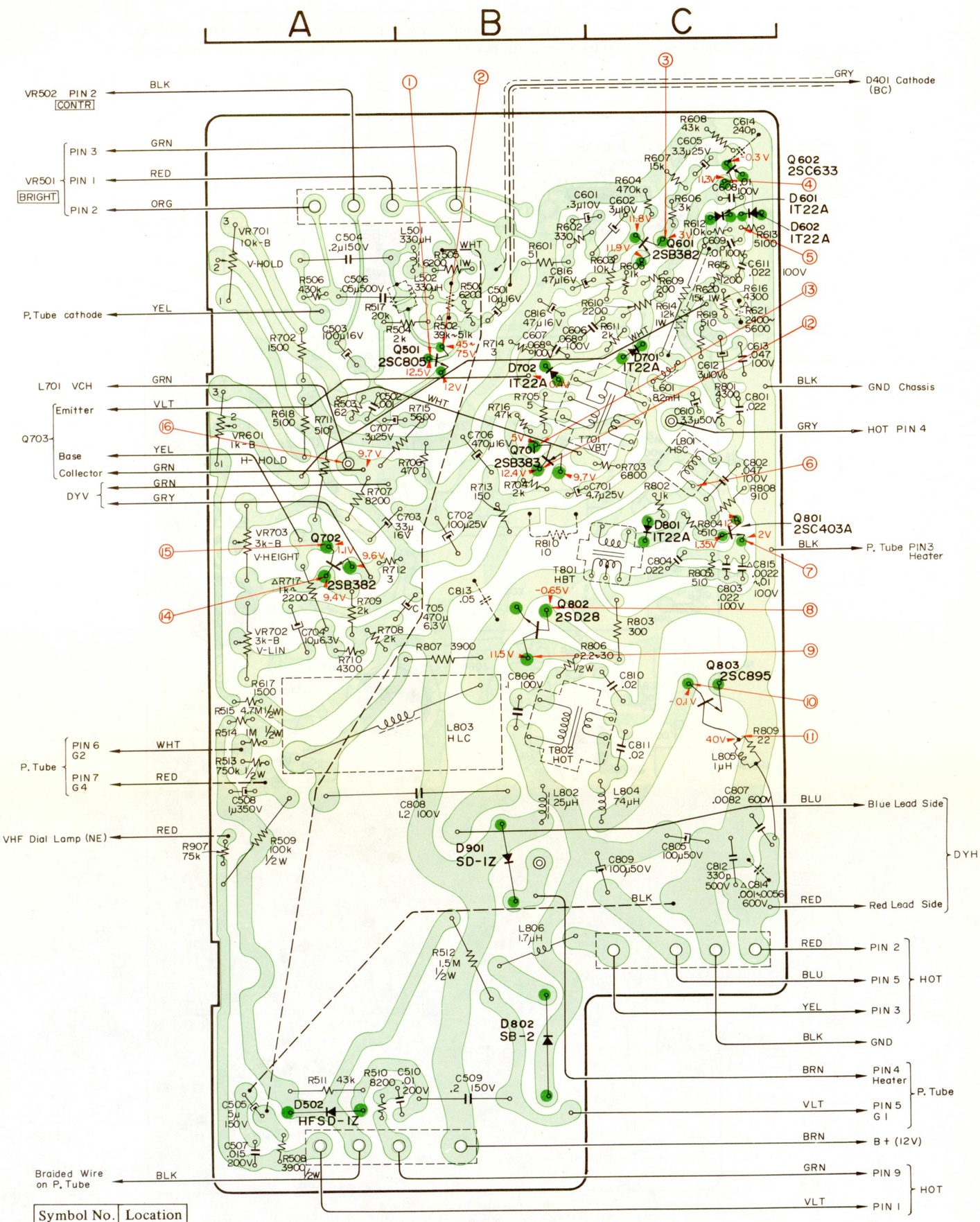
☆ Resistance and capacitance values marked with △ are to be selected.

☆ Voltages measured from chassis to point indicated with a VOM (20k ohm/V), with no signal input.

MOUNTING DIAGRAM

Deflection Circuit Board (EF)

— Conductor Side —



Symbol No.	Location
Q501	B - 2
Q601	C - 1
Q602	C - 1
Q701	B - 2
Q702	A - 3
Q801	C - 3
Q802	B - 3
Q803	C - 3,4
D502	A - 6
D601	C - 1
D602	C - 1
D801	C - 3
D802	B - 5,6
D901	B - 4,5
VR-601	A - 2
VR-701	A - 1
VR-702	A - 3
VR-703	A - 3

☆ L502, C614, C813, C814, R502, R517, R620, R621 and R810 are mounted on the conductor side.

☆ The numbers in circles (① ~ ⑯) refer to the waveforms on Page 8.

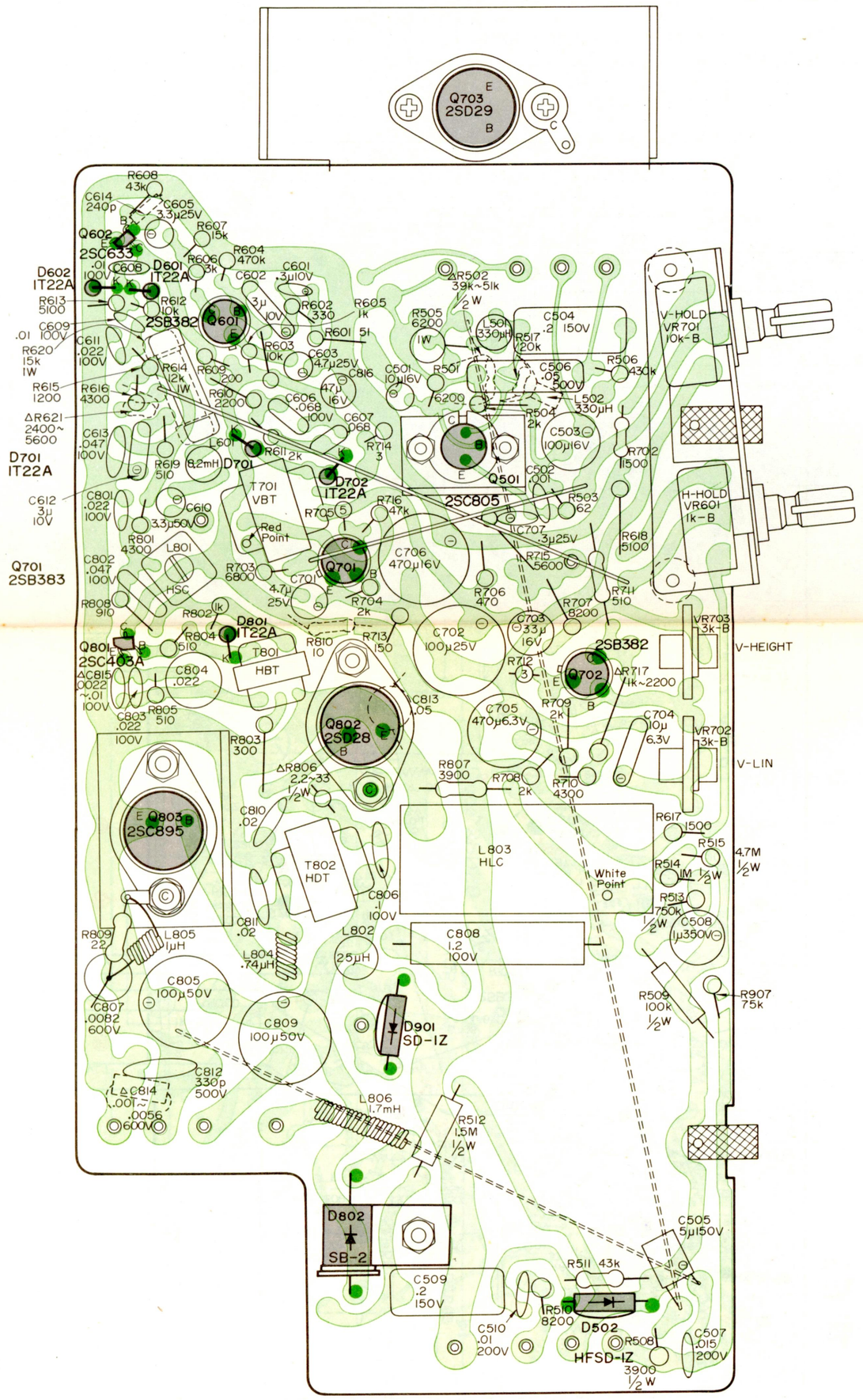
☆ Resistance and capacitance values marked with △ are to be selected.

☆ Voltages measured from chassis to point indicated with a VOM (20k ohm/V), with no signal input.

MOUNTING DIAGRAM

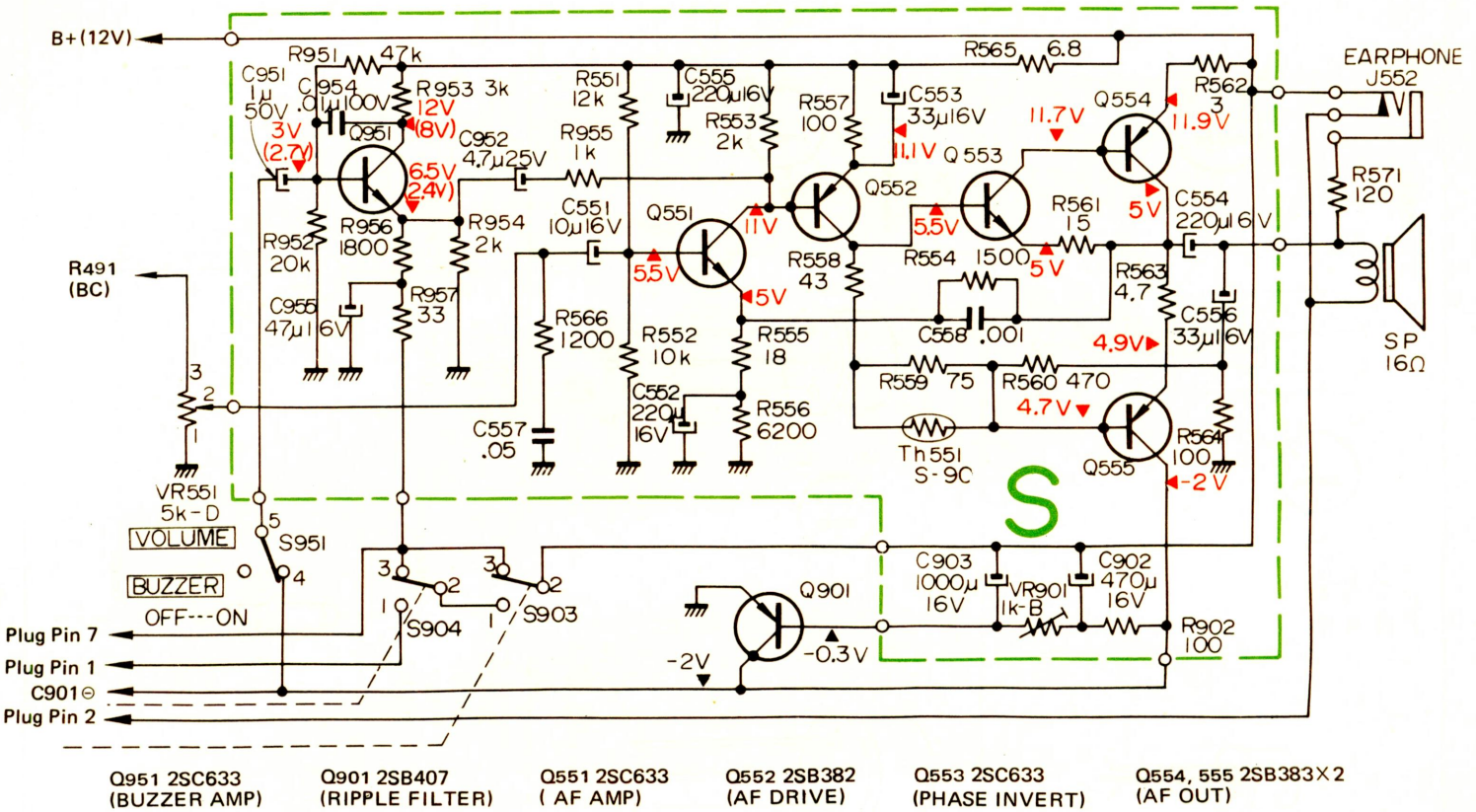
Deflection Circuit Board (EF)

— Component Side —



- L502, C614, C813, C814, R502, R517, R620, R621 and R810 are mounted on the conductor side.
- Resistance and capacitance values marked with △ are to be selected.

SOUND CIRCUIT



Q951 2SC633 (BUZZER AMP) | Q901 2SB407 (RIPPLE FILTER) | Q551 2SC633 (AF AMP) | Q552 2SB382 (AF DRIVE) | Q553 2SC633 (PHASE INVERT) | Q554, 555 2SB383X2 (AF OUT)

Resistance and capacitance values marked with △ are to be selected.

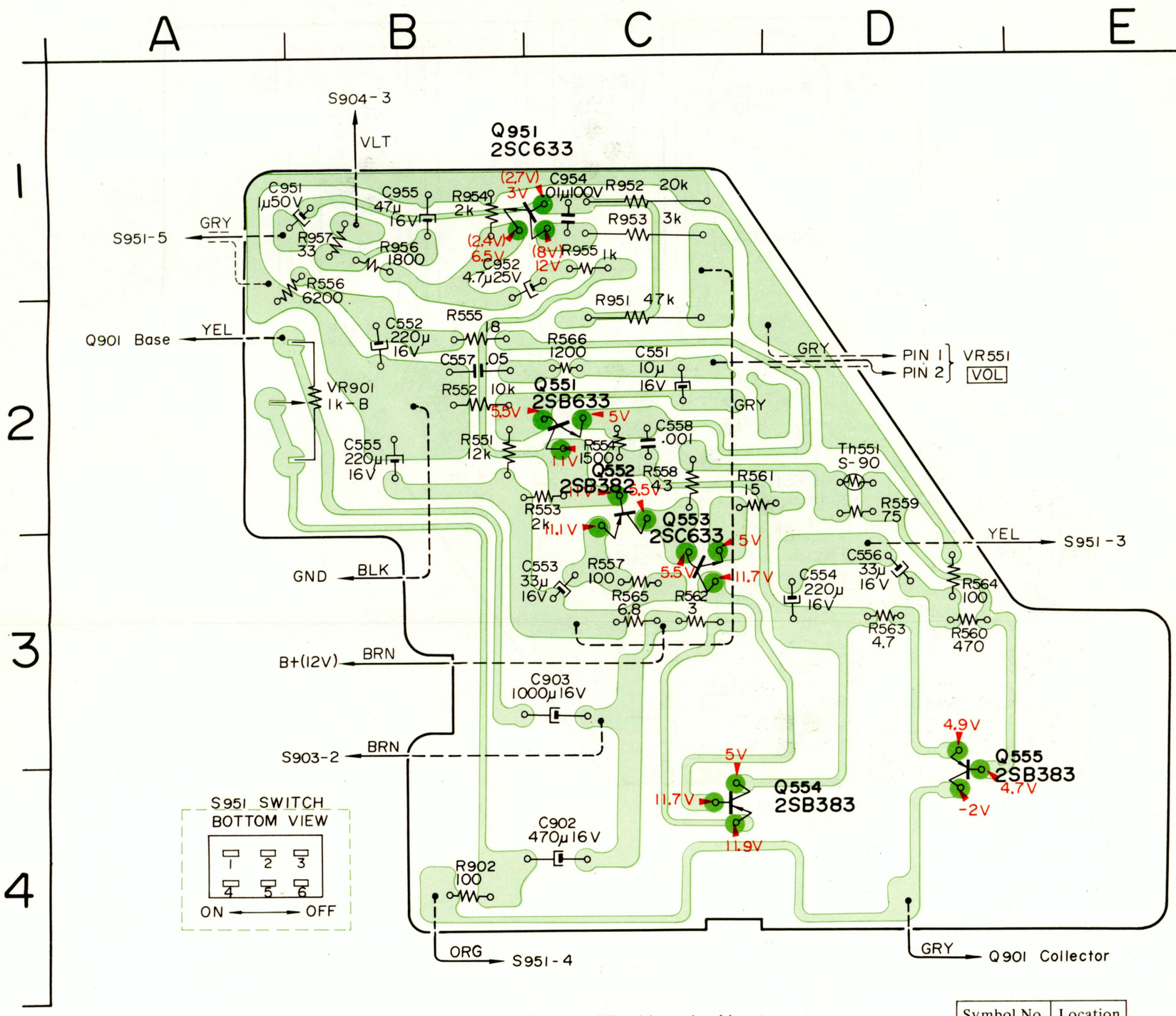
Voltages measured from chassis to point indicated with a VOM (20k ohm/V), with no signal input.

Voltage values shown in ( ) mesured with a VOM on condition that transistor Q951 is working.

MOUNTING DIAGRAM

Sound Circuit Board (S)

– Conductor Side –



☆ Voltages measured from chassis to point indicated with a VOM (20k ohm/V), with no signal input.

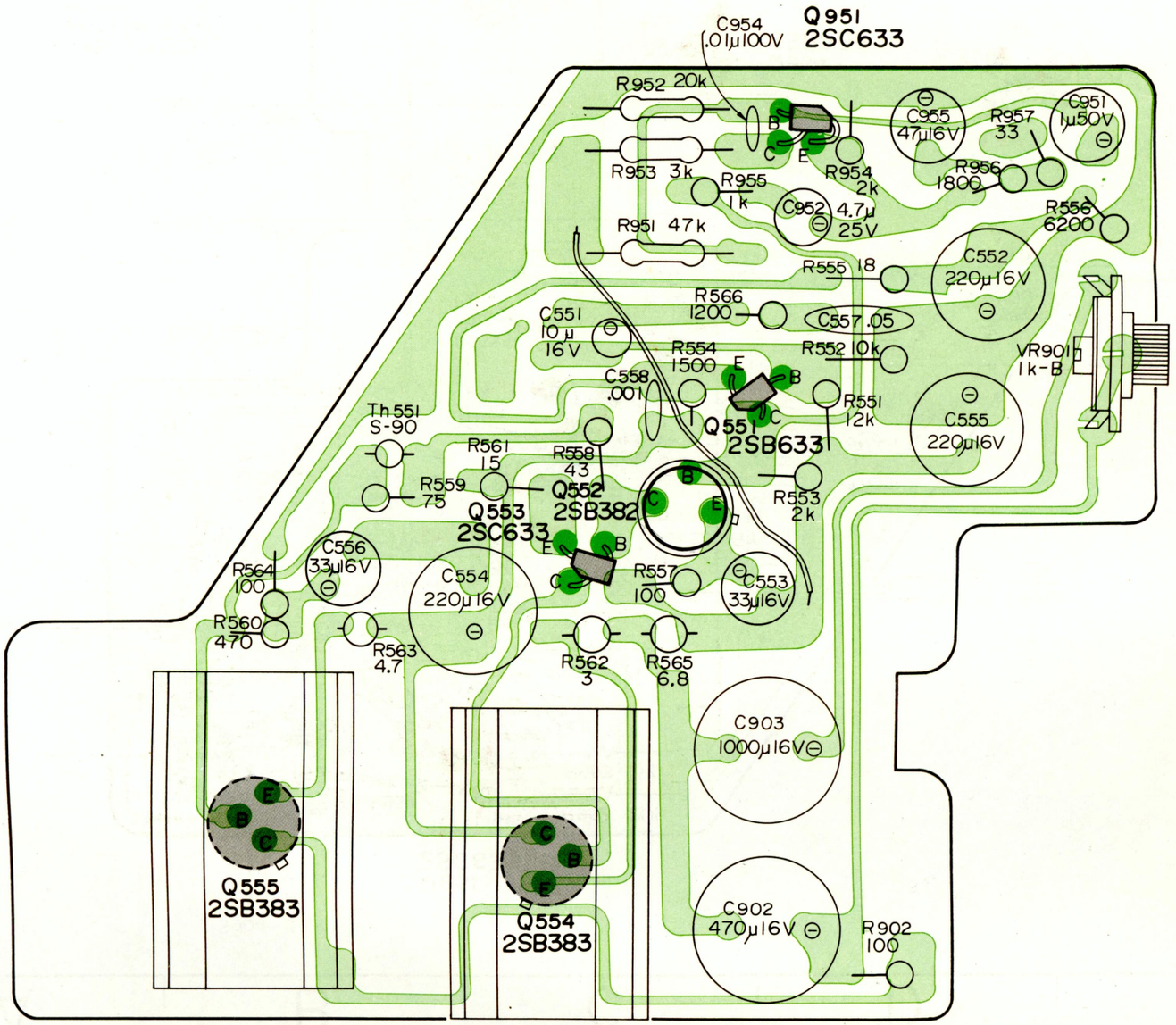
☆ Voltage values shown in ( ) measured with a VOM on condition that transistor Q951 is working.

Symbol No.	Location
Q551	C-2
Q552	C-2,3
Q553	C-3
Q554	C,D-4
Q555	D-3,4
Q951	B,C-1
VR901	A,B-2
Th551	D-2

MOUNTING DIAGRAM

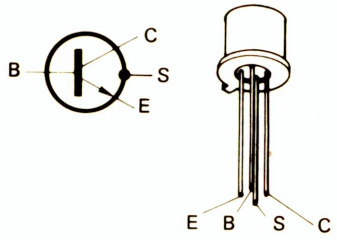
Sound Circuit Board (S)

— Component Side —

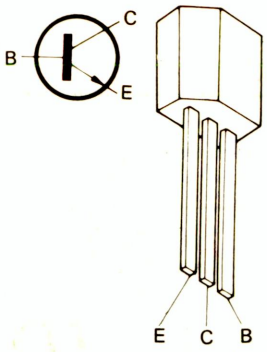


SEMICONDUCTOR
TERMINAL VIEW

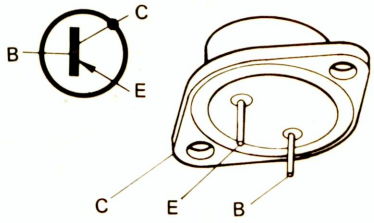
SE5020



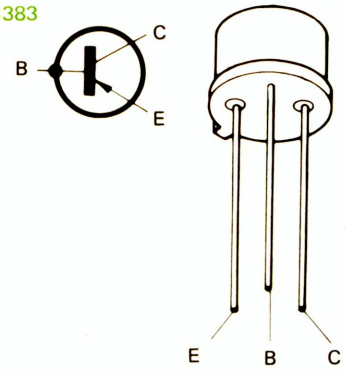
2SC629
2SC657
2SC633
2SC403A



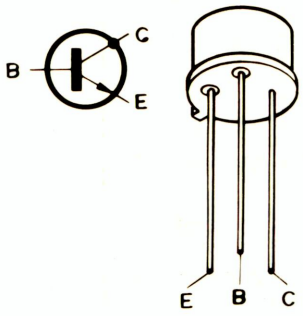
2SB407



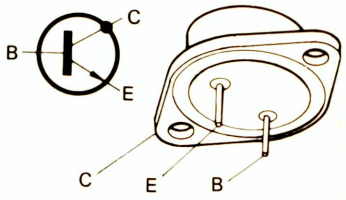
2SB382
2SB383



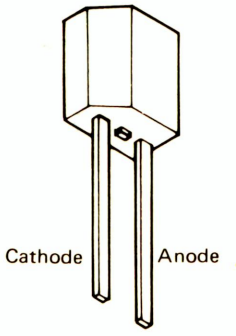
2SC805



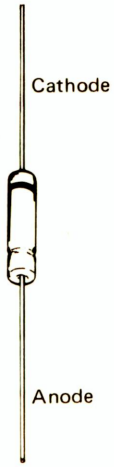
2SD28
2SD29
2SC895



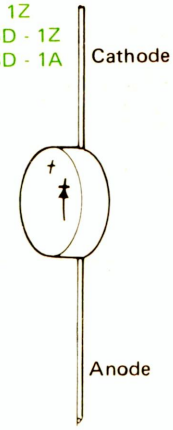
1T243



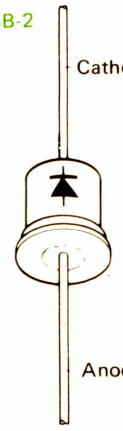
1T22
1T22A
1T23
1T261



SD - 1A
SD - 1Z
HFSD - 1Z
UFSD - 1A



SB-2



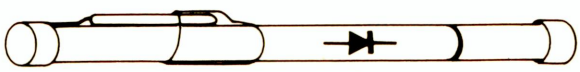
E : Emitter

C : Collector

B : Base

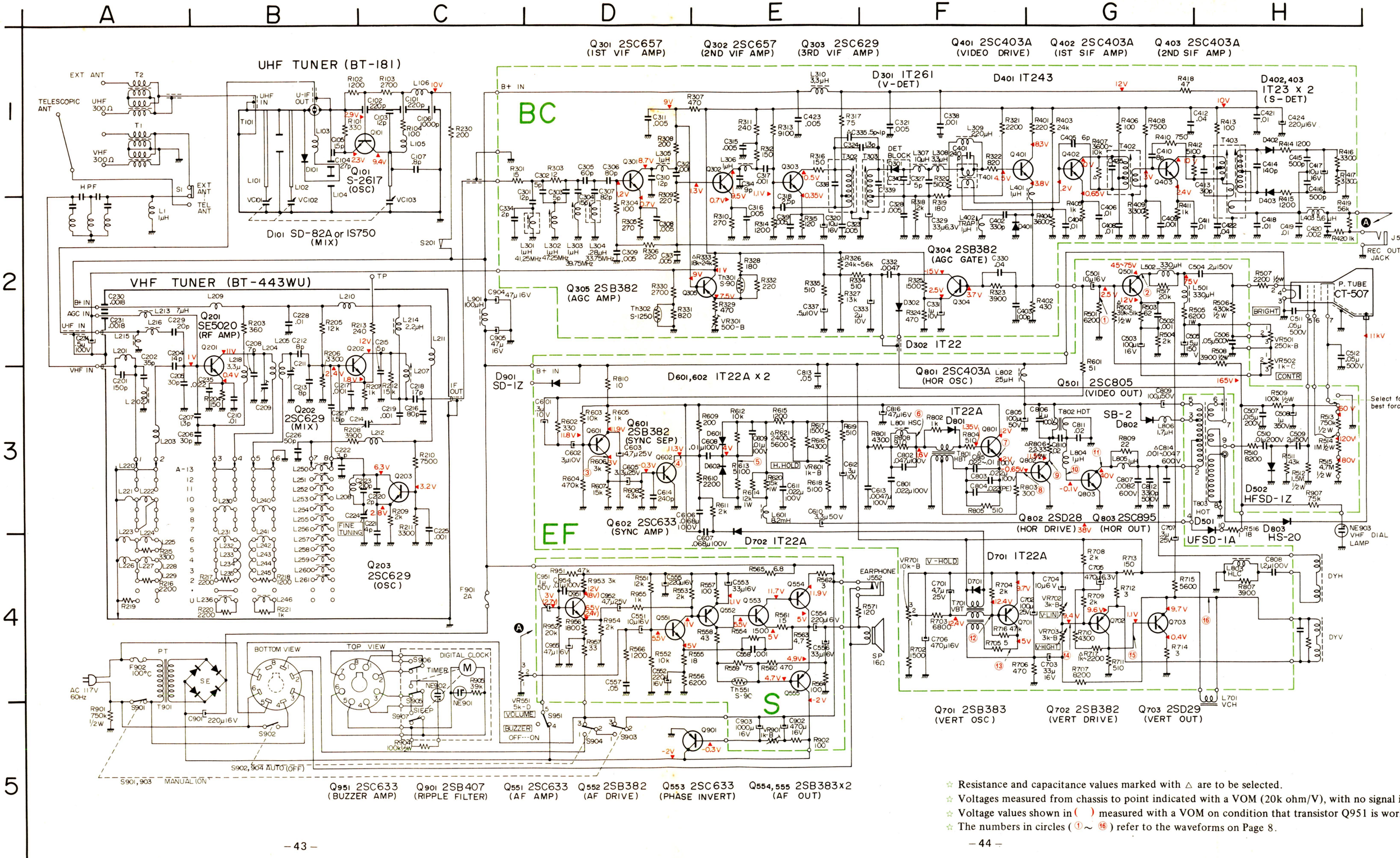
S : Shield

HS-20



SCHEMATIC DIAGRAM

—Overall—

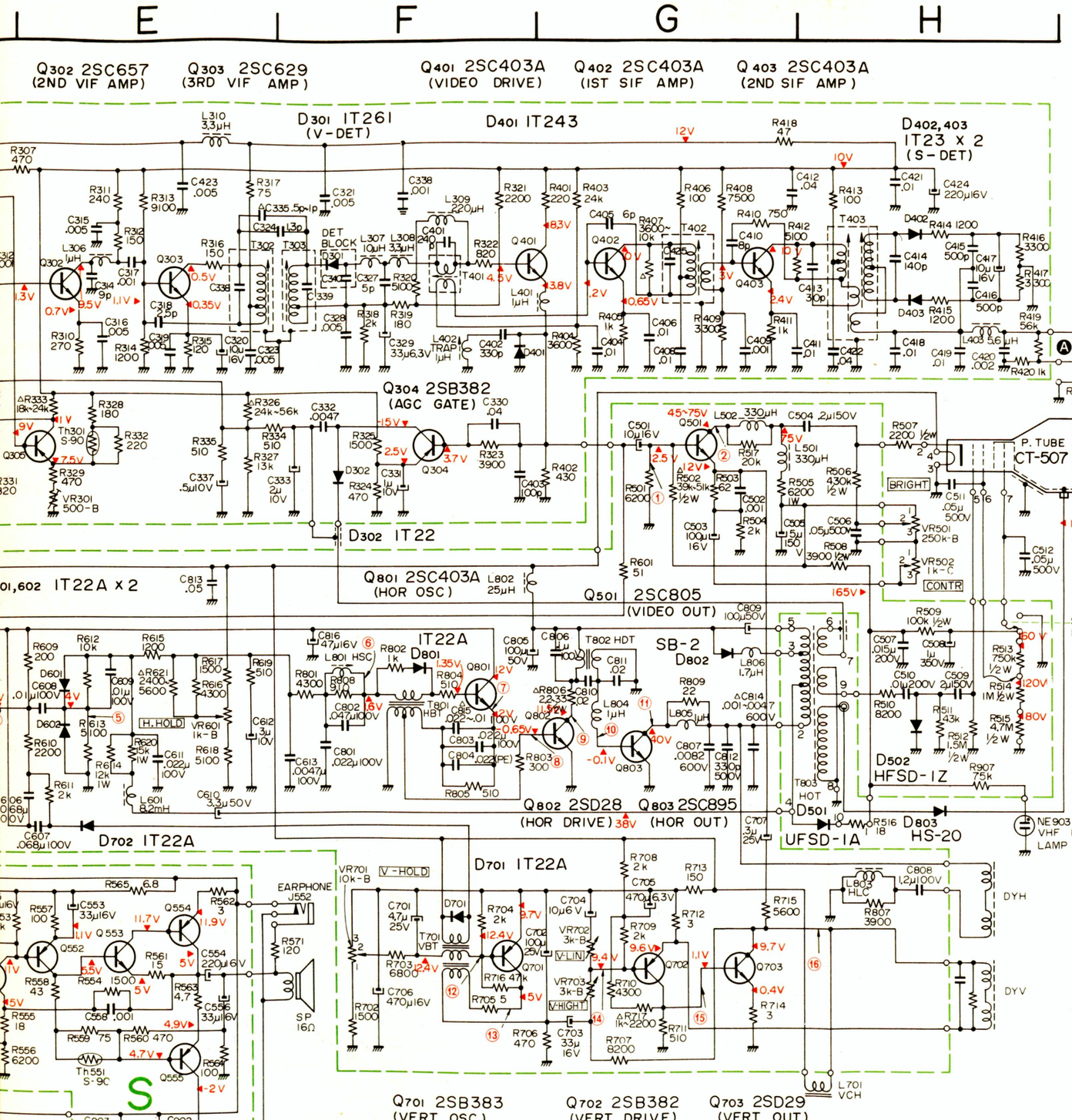


☆ Resistance and capacitance values marked with △ are to be selected.

☆ Voltages measured from chassis to point indicated with a VOM (20k ohm/V), with no signal input.

☆ Voltage values shown in ( ) measured with a VOM on condition that transistor Q951 is working.

☆ The numbers in circles (① ~ ⑯) refer to the waveforms on Page 8.

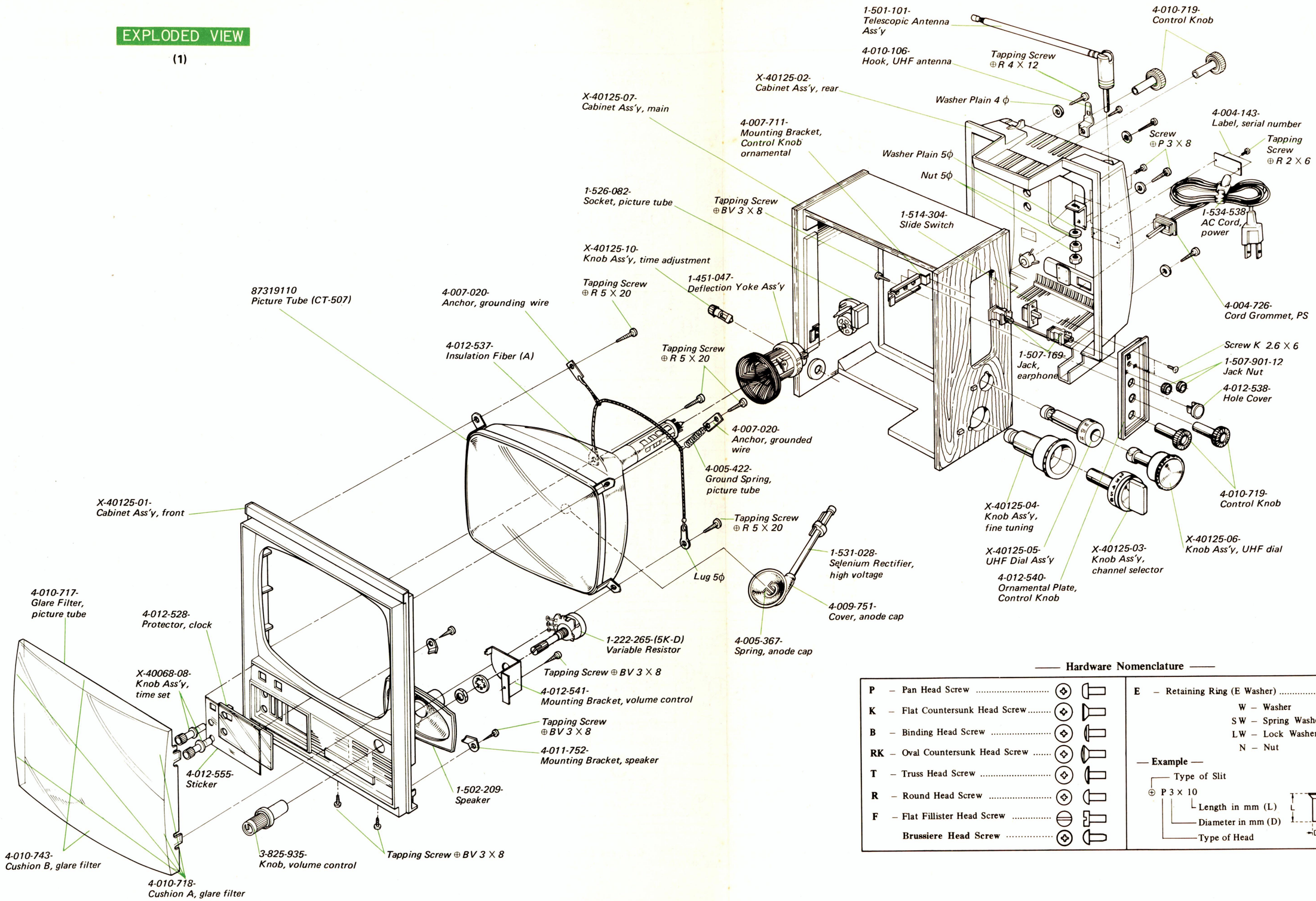


Symbol No.	Location
Q101	C - 1
Q201	B -2,3
Q202	B,C-2,3
Q203	C - 3
Q301	D - 1
Q302	E - 1
Q303	E - 1
Q304	F - 2
Q305	E - 2
Q401	F - 1
Q402	G - 1
Q403	G - 1
Q501	G - 2
Q601	D - 3
Q602	D - 3
Q701	F - 4
Q702	G - 4
Q703	G - 4
Q801	F - 3
Q802	G - 3
Q803	G - 3
Q551	D - 4
Q552	E - 4
Q553	E - 4
Q554	E - 4
Q555	E - 4
Q901	D,E - 5
Q951	D - 4
D101	B - 1
D301	F - 1
D302	F - 2
D401	F - 2
D402	H - 1
D403	H - 1
D501	G,H - 4
D502	H - 3
D601	E - 3
D602	E - 3
D701	F - 4
D702	E - 4
D801	F - 3
D802	G - 3
D803	H - 3
D901	D - 3
SE	B - 4
VR - 301	D,E - 2
VR - 501	H - 2
VR - 502	H - 2,3
VR - 551	C - 4
VR - 601	E - 3
VR - 701	F - 4
VR - 702	G - 4
VR - 703	G - 4
VR - 901	E - 5

☆ Resistance and capacitance values marked with △ are to be selected.
☆ Voltages measured from chassis to point indicated with a VOM (20k ohm/V), with no signal input.
☆ Voltage values shown in ( ) measured with a VOM on condition that transistor Q951 is working.
☆ The numbers in circles (① ~ ⑯) refer to the waveforms on Page 8.

EXPLODED VIEW

(1)



Hardware Nomenclature

P	– Pan Head Screw	
K	– Flat Countersunk Head Screw	
B	– Binding Head Screw	
RK	– Oval Countersunk Head Screw	
T	– Truss Head Screw	
R	– Round Head Screw	
F	– Flat Fillister Head Screw	
	Brussiere Head Screw	

E – Retaining Ring (E Washer)

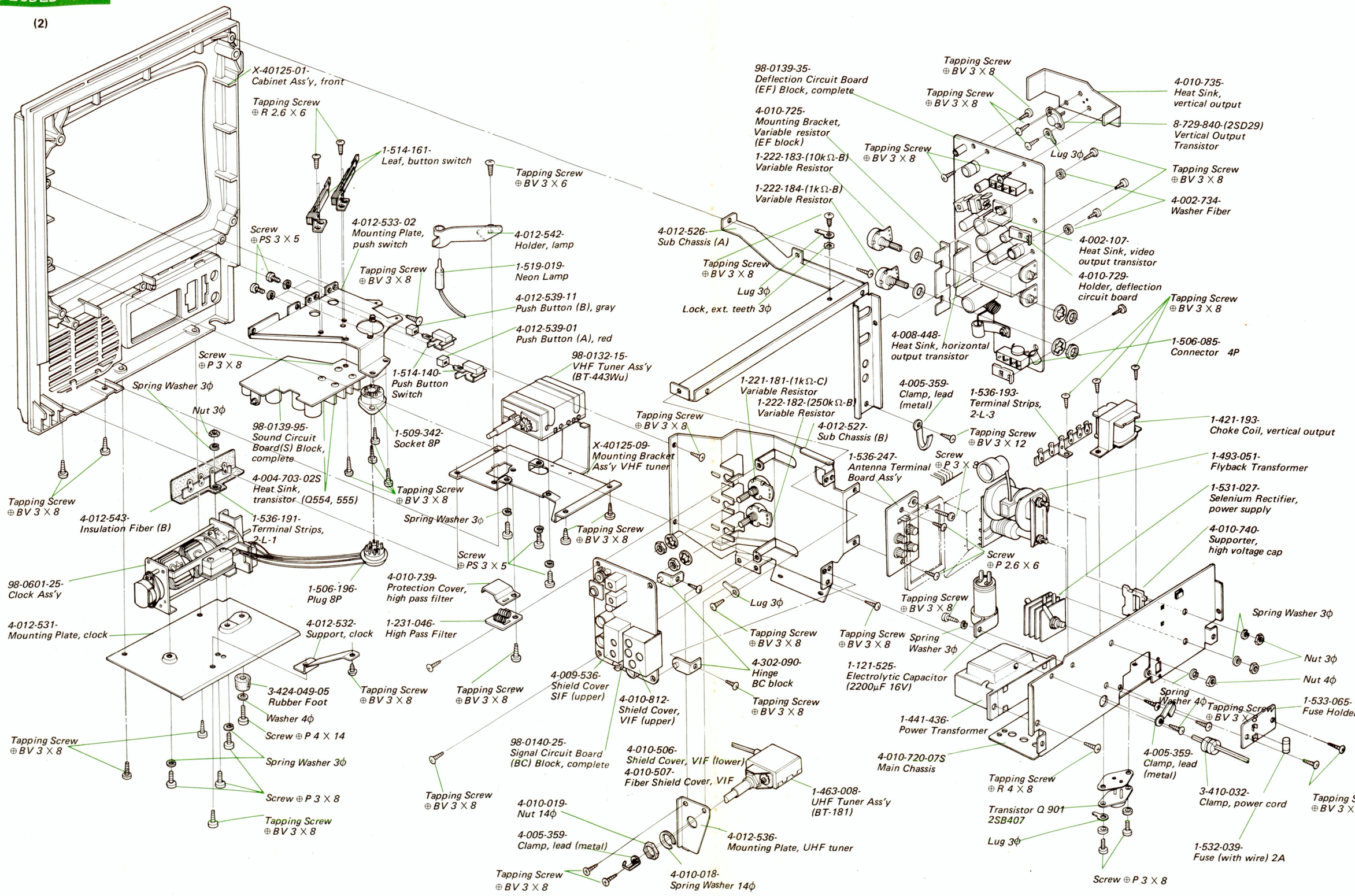
W – Washer
SW – Spring Washer
LW – Lock Washer
N – Nut

Example

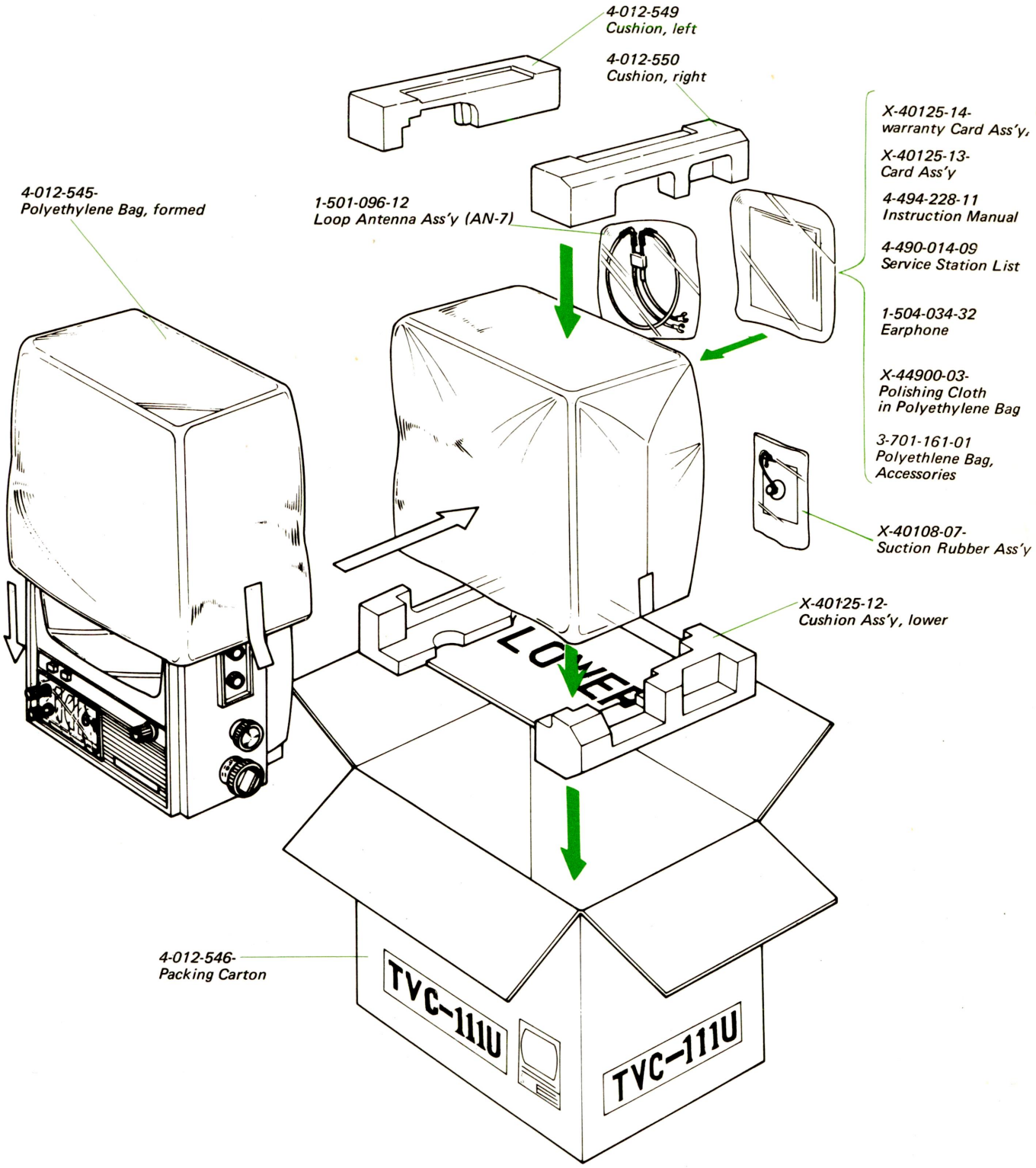
Type of Slit
⊕ P 3 X 10
Length in mm (L)
Diameter in mm (D)
Type of Head

EXPLODED VIEW

(2)


X-40125-01- Cabinet Ass'y, front
Tapping Screw ⊕R 2.6 X 6
1-514-161- Leaf, button switch
Tapping Screw ⊕BV 3 X 6
Screw ⊕PS 3 X 5
4-012-533-02 Mounting Plate, push switch
Tapping Screw ⊕BV 3 X 8
4-012-542- Holder, lamp
1-519-019- Neon Lamp
4-012-539-11 Push Button (B), gray
4-012-539-01 Push Button (A), red
Screw ⊕P 3 X 8
1-514-140- Push Button Switch
98-0132-15- VHF Tuner Ass'y (BT-443Wu)
Spring Washer 3ϕ
Nut 3ϕ
98-0139-95- Sound Circuit Board(S) Block, complete
1-509-342- Socket 8P
4-004-703-02S Heat Sink, transistor (Q554, 555)
Tapping Screw ⊕BV 3 X 8
X-40125-09- Mounting Bracket Ass'y VHF tuner
Tapping Screw ⊕BV 3 X 8
Spring Washer 3ϕ
Tapping Screw ⊕BV 3 X 8
4-012-543- Insulation Fiber (B)
1-536-191- Terminal Strips, 2-L-1
Screw ⊕PS 3 X 5
98-0601-25- Clock Ass'y
1-506-196- Plug 8P
4-010-739- Protection Cover, high pass filter
4-012-531- Mounting Plate, clock
4-012-532- Support, clock
1-231-046- High Pass Filter
3-424-049-05 Rubber Foot
Tapping Screw ⊕BV 3 X 8
Tapping Screw ⊕BV 3 X 8
Tapping Screw ⊕BV 3 X 8
Washer 4ϕ
Screw ⊕P 4 X 14
Tapping Screw ⊕BV 3 X 8
Spring Washer 3ϕ
Screw ⊕P 3 X 8
Tapping Screw ⊕BV 3 X 8
4-009-536- Shield Cover SIF (upper)
4-010-812- Shield Cover, VIF (upper)
98-0140-25- Signal Circuit Board (BC) Block, complete
4-010-506- Shield Cover, VIF (lower)
4-010-507- Fiber Shield Cover, VIF
Tapping Screw ⊕BV 3 X 8
4-010-019- Nut 14ϕ
4-005-359- Clamp, lead (metal)
Tapping Screw ⊕BV 3 X 8
4-010-018- Spring Washer 14ϕ
4-012-536- Mounting Plate, UHF tuner
1-463-008- UHF Tuner Ass'y (BT-181)
98-0139-35- Deflection Circuit Board (EF) Block, complete
4-010-725- Mounting Bracket, Variable resistor (EF block)
1-222-183-(10kΩ-B) Variable Resistor
1-222-184-(1kΩ-B) Variable Resistor
4-012-526- Sub Chassis (A)
Tapping Screw ⊕BV 3 X 8
Lug 3ϕ
Lock, ext. teeth 3ϕ
1-221-181-(1kΩ-C) Variable Resistor
1-222-182-(250kΩ-B) Variable Resistor
Tapping Screw ⊕BV 3 X 8
4-012-527- Sub Chassis (B)
Tapping Screw ⊕BV 3 X 8
Lug 3ϕ
Tapping Screw ⊕BV 3 X 8
4-302-090- Hinge BC block
Tapping Screw ⊕BV 3 X 8
Tapping Screw ⊕BV 3 X 8
Tapping Screw ⊕BV 3 X 8
4-010-735- Heat Sink, vertical output
8-729-840-(2SD29) Vertical Output Transistor
Lug 3ϕ
Tapping Screw ⊕BV 3 X 8
4-002-734- Washer Fiber
4-002-107- Heat Sink, video output transistor
4-010-729- Holder, deflection circuit board
Tapping Screw ⊕BV 3 X 8
1-506-085- Connector 4P
4-008-448- Heat Sink, horizontal output transistor
4-005-359- Clamp, lead (metal)
1-536-193- Terminal Strips, 2-L-3
Tapping Screw ⊕BV 3 X 12
1-536-247- Antenna Terminal Board Ass'y
Screw ⊕P 3 X 8
1-421-193- Choke Coil, vertical output
1-493-051- Flyback Transformer
1-531-027- Selenium Rectifier, power supply
4-010-740- Supporter, high voltage cap
Screw ⊕P 2.6 X 6
Tapping Screw ⊕BV 3 X 8
Spring Washer 3ϕ
Tapping Screw ⊕BV 3 X 8
Spring Washer 3ϕ
Nut 3ϕ
Nut 4ϕ
Spring Washer 4ϕ
Tapping Screw ⊕BV 3 X 8
1-533-065- Fuse Holder
1-121-525- Electrolytic Capacitor (2200μF 16V)
1-441-436- Power Transformer
4-010-720-07S Main Chassis
4-005-359- Clamp, lead (metal)
3-410-032- Clamp, power cord
Tapping Screw ⊕BV 3 X 8
Tapping Screw ⊕R 4 X 8
Transistor Q 901 2SB407
Lug 3ϕ
1-532-039- Fuse (with wire) 2A
Screw ⊕P 3 X 8

PACKING



When ordering replacement parts, you should use PARTS NUMBER listed on the Complete Spare Parts List attached herewith or shown in the Exploded View.
The symbol number should not be used for ordering purposes.

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